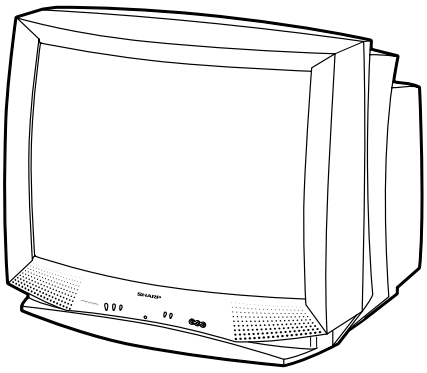
SHARP SERVICE MANUAL

S61W4CR32S40/



COLOR TELEVISION

Chassis No. SN-92M

MODELS 32R-S50/S400, 36R-S50/S400, CR32S40

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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ELECTRICAL SPECIFICATIONS

POWER INPUT ..... 120V AC 60 Hz

POWER RATING

- 32R-S50/S400, CR32S40 ..... 140W
- 36R-S50/S400 ..... 165W

PICTURE SIZE

- 32R-S50/S400, CR32S40 ..... 3,073cm^2 (476sq inch)
- 36R-S50/S400 ..... 3,905cm^2 (605sq inch)

CONVERGENCE ..... Magnetic

SWEEP DEFLECTION ..... Magnetic

FOCUS ..... Hi-Bi-Potential Electrostatic

INTERMEDIATE FREQUENCIES

- Picture IF Carrier Frequency ..... 45.75 MHz
- Sound IF Carrier Frequency ..... 41.25 MHz
- Color Sub-Carrier Frequency ..... 42.17 MHz (Nominal)

AUDIO POWER

- OUTPUT RATING ..... 3.0W + 3.0W (at 10% distortion and Dual CH Operate)

SPEAKER

- SIZE ..... 12 x 6 cm (2 pcs.)
- VOICE COIL IMPEDANCE ..... 6 ohm at 400 Hz

ANTENNA INPUT IMPEDANCE

- VHF/UHF ..... 75 ohm Unbalanced

TUNING RANGES

- VHF-Channels ..... 2 thru 13
- UHF-Channels ..... 14 thru 69
- CATV Channels ..... 1 thru 125 (EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

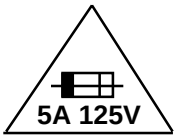
This document has been published to be used for after sales service only.
The contents are subject to change without notice.

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
   To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 5A-125V FUSE.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
   It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
   The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
   Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

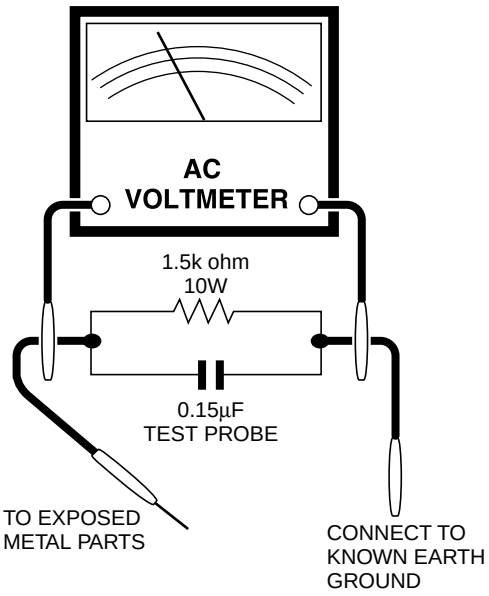
BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  AII checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)
  Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

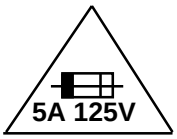
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.
3. Les déversoirs thermiques à semi-conducteurs peuvent présenter un danger de choc électrique lorsque le réceqteur est en marche.
4. Le châssis de ce récepteur possède deux systèmes de masse qui sont séparées par du matériel d'isolation. Le système de masse non-isolée (sous tension) est pour le circuit du régulateur de tension B+ et le circuit de sortie horizontale. Le système de masse isolée est pour les tensions DC B+ basses et le circuit secondaire du transformateur haute tension. Pour éviter tout risque d'électrocution lors de l'entretien de ce châssis, utiliser un transformateur d'isolation entre le cordon de ligne et la prise de courant.



PRECAUTION: POUR LA PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE, REMPLACER LE FUSIBLE PAR UN FUSIBLE DE MEME TYPE 5A-125V.

REPARATION DU SYSTEME A HAUTE TENSION ET DU TUBE-IMAGE

Lors de la réparation de ce systéme, supprimer la charge statique en branchant une résistance de 10 kΩ en série avec un fil isolé (comme une sonde d'essai) entre la mise à la terre du tube-image et le fil d'anodel. (Le corden d'alimentation doit être retiré de la prise murale.)

1. Le tube image dans ce récepteur emploie une protection intégrée contre l'implosion.
2. Par mesure de sécurité, changer le tube-image pour un tube du même numéro de type.
3. Ne pas lever le tube-image par son col.
4. Ne manipuler le tube-image qu'en porant des lunettes incassables et qu'après avoir déchargé totalement la haute tension.

LIMITES DES RADIATIONS X ET DE LA HAUTE TENSION

1. Tout le personnel réparateur doit être instruit des instructions et procédés relatifs aux radiations X.
   Le tube-image, seule source de rayons X dons les téleviseurs transistorisés, n'émet pourtant pas de rayons mesurables si la haute tension est maintenue à un niveau préconisé dans la section "Vérification de la haute tension".
   C'est seulement quand la haute tension est excessive que les rayons X peuvent entrer dans l'enveloppe du tube-image y compris le conducteur de verre. Il est important de maintenir la haute tension en-dessous du niveau spécifié.
2. Il est essentiel que le réparateur ait sous la main un voltmètre à haute tension qui doit être périodiquement étalonné.
3. La haute tension doit toujours être maintenue à la valeur de régime -et pas plus haute. L'opération à des tensions plus élevées peut entraîner une panne du tube-image ou du circuit à haute tension et, dans certaines conditions, peut entraîner une radiation dépassant les niveaux préscrits.
4. Quand le régulateur à haute tension fonctionne correctement, il n'y a aucun problème de radiation X. Chaque fois qu'un châssis couleurs est réparé, la luminosité doit être examinée bout en contrôlant la haute tension à l'aide d'un voltmètre pour s'assurer que la haute tension ne dépasse pas la valeur spécifiée et qu'elle soit correctement réglée.
5. Ne pas utiliser un tube-image autre que celui spécifié et ne pas effectuer de modifications déconseillées du circuit à haute tension.
6. Lors de la recherche des pannes et des mesures d'essai sur un récepteur qui présente une haute tension excessive, éviter de s'approcher inutilement du récepteur.
   Ne pas faire fonctionner le récepteur plus longtemps que nécessaire pour localiser la cause de la tension excessive.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

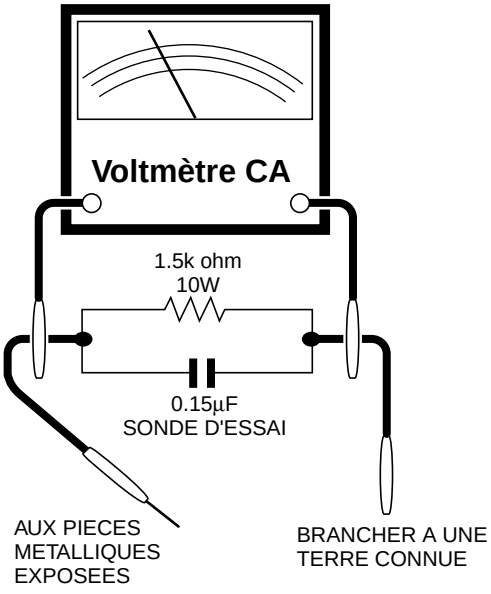
(Suite)

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120V (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1,5 kΩ 10 watts en parallèle avec un condensateur de 0,15µF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000Ω/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  Tous les courants mesurés ne doivent pas dépasser 0,5 mA.
  Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.

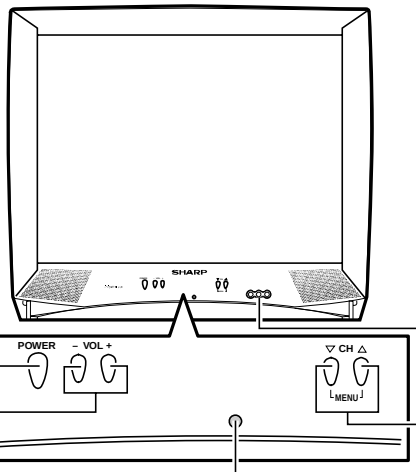


AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

LOCATION OF USER'S CONTROL
(32R-S50, 36R-S50)

Front Panel



POWER
Press → On.
Press again → Off.

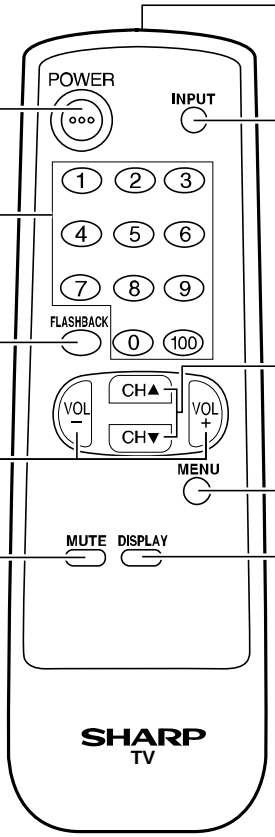
VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.

VIDEO/AUDIO IN 2 TERMINALS
(VIDEO/AUDIO terminals are also provided on the rear.)

CHANNEL UP/DOWN – MENU
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Press both at the same time to access the MAIN MENU screen.

SENSOR AREA FOR
REMOTE CONTROL

Basic Remote Control Functions



Infrared Transmitter Window

POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.
• In menu mode, changes or selects the TV adjustments.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• CLOSED CAPTION appears when sound is muted.

INPUT
Press → Switch to external video input mode.
Press again → Switch to TV mode.

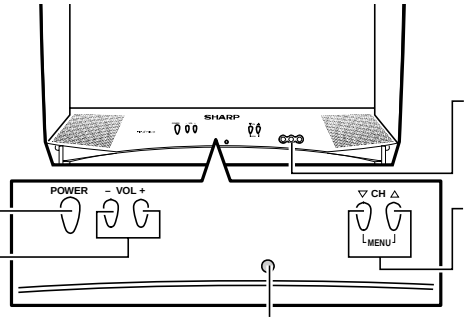
CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the " ⬍ " mark of the MENU screen.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

DISPLAY
Press → Displays receiving channel for four seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

LOCATION OF USER'S CONTROL (Continued)
(32R-S400, 36R-S400, CR32S40)

Front Panel



POWER
Press → On.
Press again → Off.

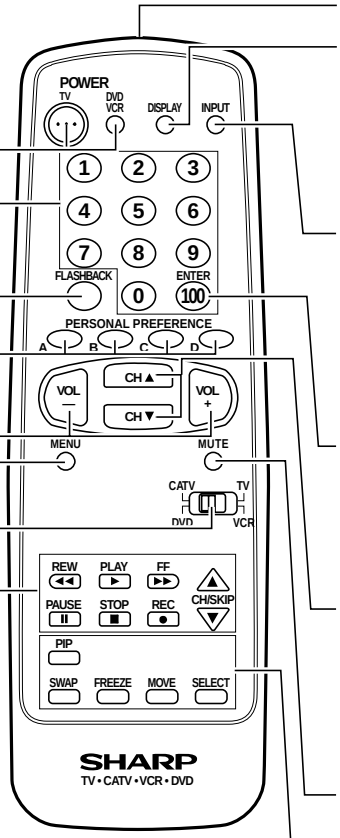
VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.

VIDEO/AUDIO IN 2 TERMINALS
(VIDEO/AUDIO terminals are also provided on the rear.)

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Press both at the same time to access the MAIN MENU screen.

SENSOR AREA FOR
REMOTE CONTROL

Basic Remote Control Functions



Infrared Transmitter Window

POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

PERSONAL PREFERENCE
With the Personal Preference buttons, you can program your favorite programs by using the 4 categories A, B, C and D. The channels can be accessed quickly by using these buttons.

VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.
• In menu mode, changes or selects the TV adjustments.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

CATV/DVD-TV/VCR MODE SELECT SWITCH
In TV/VCR position, sends power and channel select commands (Channel up/down and Random Access buttons) to the TV and VCR control.
In CATV/DVD position, sends power and channel select commands to a cable TV converter and DVD control.

DVD/VCR CONTROL

DISPLAY
Press → Displays receiving channel for four seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

INPUT
Press → Switch to external video INPUT 1 mode.
Press 2 times → Switch to external video INPUT 2 mode.
Press 3 times → Switch back to the original TV mode.

ENTER
Used in some instances where a Cable Converter Box requires an "enter" command after selecting channels, when using the REMOTE KEYPAD button.

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the " ⬍ " mark of the MENU screens.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• CLOSED CAPTION appears when sound is muted.

PIP FUNCTION
With the VIDEO inputs, you can watch two pictures at the same time.

Note:
- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 5.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads 13.8 ±0.7V (32R-S50, 32R-S400, CR32S40)/13.2 ± 0.7V(36R-S50, 36R-S400).
5. Apply external 17.0V DC (32R-S50, 32R-S400, CR32S40)/ 16.2V DC (36R-S50, 36R-S400) at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and plug the AC cord power on. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S19" and Bus data "01" (Y-mute on).
4. The voltage should be approximately 32.8kV(32R-S50, 32R-S400, CR32S40)/33.4kV(36R-S50, 36R-S400) (at zero beam).
   If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "S01" to "P07". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or vol-down button to adjust the data number.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the same time, plug the AC cord into a wall socket.
Now the TV set is switched on and enters the service mode.
To exit the service mode, turn the television off by pressing the power button.

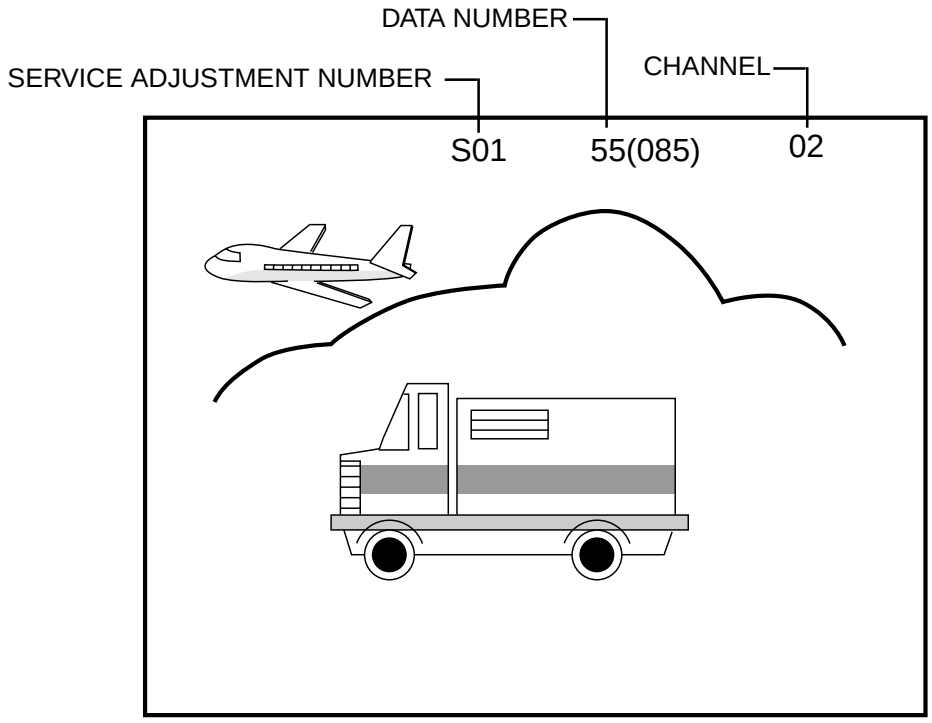


Figure A.

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT CONTENTS
		INITIAL VALUE	RANGE	
S01	PICTURE	5E	00-7F	
S02	TINT	46	00-7F	
S03	COLOUR	32	00-7F	
S04	BRIGHTNESS	40	00-7F	
S05	SHARPNESS	28	00-3F	Must be set to "24"
S06	Vert. PHASE	00	00-07	Must be set to "00"
S07	Hor. PHASE	12	00-1F	
S08	RF AGC	23	00-3F	
S09	Vert. AMPLITUDE	20	00-3F	
S10	PIF VCO	2C	00-7F	
S11	R CUT-OFF	00	00-FF	
S12	G CUT -OFF	00	00-FF	
S13	B CUT-OFF	00	00-FF	
S14	G GAIN	7F	00-FF	
S15	B GAIN	7F	00-FF	
S16	TRAP	00	00,01	Must be set to "01"
S17		4B	00-3F	
S18	CC POSITION	17	00-FF	
S19	MUTE	00	00,01,03	"00" : NORMAL, "01" : Y-MUTE, "03" : V-STOP & Y-MUTE
S20	ENERGY SAVE OFFSET	20	00-3F	Must be set to "23"
S21	PERIOD ADJ.	7A	00-FF	Must be set to "7A"
S22	FAO VOLUME STEP	25	00-32	
S23	TUNER	00	00,01	Must be set to "00"
S24	FAV. COLOR RTONE-G	F9	00-FF	
S25	FAV. COLOR RTONE-B	EB	00-FF	
S26	FAV. COLOR BTONE-G	02	00-FF	
S27	FAV. COLOR BTONE-B	08	00-FF	
S28	COLOR TEMP LOW-G	E1	00-FF	
S29	COLOR TEMP LOW-B	AE	00-FF	
S30	COLOR TEMP ML-G	FA	00-FF	
S31	COLOR TEMP ML-B	E7	00-FF	
S32	COLOR TEMP HIGH-G	08	00-FF	
S33	COLOR TEMP HIGH-B	14	00-FF	
OP1	OPTION1	00	00-FF	Must be set to "B1" for 32R-S50/36R-S50 Must be set to "B7" for 32R-S400/36R-S400/CR32S40
OP2	OPTION2	00	00-FF	Must be set to "C7" for 32R-S50/36R-S50 Must be set to "E7" for 32R-S400/36R-S400/CR32S40
M01	INPUT LEVEL	0A	00-0F	
M02	ST VCO	20	00-3F	
M03	FILTER	1C	00-3F	
M04	WIDE BAND	20	00-3F	
M05	SPECTRAL	1B	00-3F	
P01	PIP Y-LEVEL	30	00-7F	
P02	PIP TINT	29	00-3F	Must be set to "29" for 32R-S400/36R-S400/CR32S40
P03	PIP COLOR	2E	00-7F	
P04	PIP Y-OFFSET	09	00-1F	Must be set to "09" for 32R-S400/36R-S400/CR32S40
P05	PIP H-POSITION	0A	00-FF	Must be set to "0A" for 32R-S400/36R-S400/CR32S40
P06	PIP BGPM	00	00-0F	Must be set to "00" for 32R-S400/36R-S400/CR32S40
P07	PIP FREERUN	0B	00-0F	Must be set to "0B" for 32R-S400/36R-S400/CR32S40

Table - A

Holding down both the VOL-up/CH-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the VOL-up/CH-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101. Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M05).
IC1801	X		Adjust items related to P-IN-P only (P01~P07).

Table - B

■ SERVICE ADJUSTMENT

VCO Adjustment

1. Connect a digital voltmeter between pin (44) of IC201 and ground.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data so that digital voltmeter reads 2.2V.
5. Adjustment is completed, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S08".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.
   Note 1 : You will have to come out of the service mode to select another channel.
   Note 2 : Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "S03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
3. Select the service adjustment "S19" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
4. Select the service adjustment "S04" and adjust data value to "4B".
5. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
6. Adjust the service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
7. Select the service adjustment "S19" and reset data to "00". Select the service adjustment "S03" and reset data to obtain normal color level.
8. Reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set to "00" (minimum color)(Record original data code under adjustment "S03" before changing). "S03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select the service adjustment "S03" and adjust data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S01".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set customer tint control to center of it's range.
3. Enter the service mode and select the service adjustment "S02".
4. Adjust "S02" data value to obtain normal flesh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
3. Enter the service mode and select service adjustment "S03".
4. Adjust "S03" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S04".
4. Adjust "S04" data value to obtain normal brightness level.

Vertical-Size and Linearity Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S09".
3. While observing the top and bottom of the screen, adjust "S09" data value to proper vertical size.
4. Using the R502 control adjust for the best linearity.

Vertical Phase Adjustment

1. Enter the service mode and select the service adjustment "S06".
2. Adjust data value to "00".
   Note: This must be set "00" when changed data retrace line will appear.

Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S07".
3. Adjust "S07" data value so that picture is centered.

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S18".
3. A black text box appears on the screen. (see ***Figure B.*** below)
4. Adjust "S18" data value so that text box is positioned in the center of the screen.

3.58MHz Trap Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S16".
3. This is a two position adjustment, "00" is ON, "01" is OFF.
4. Adjust data value to "01" for normal viewing.

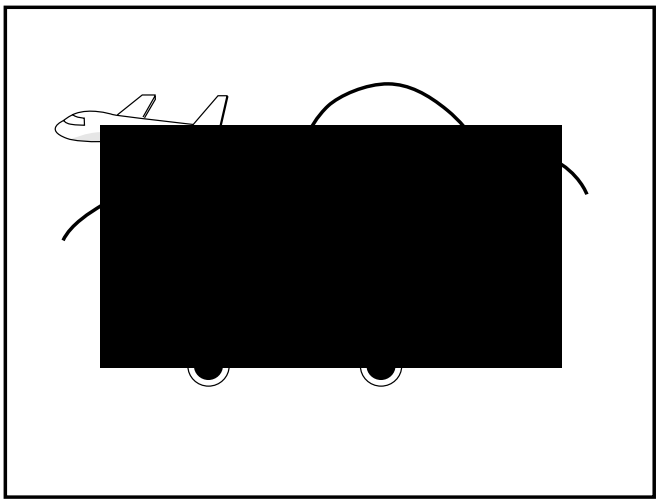


Figure B.

Sharpness and Audio Balance Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustments "S05" for sharpness and "S17" for audio balance.

- **Sharpness Adjustment**

3. Adjust data value to "24"(center of data range) for sharpness adjustment.

- **Audio Balance Adjustment**

4. Adjust data value to "20"(center of data range) for Audio balance adjustment.

Vertical Center Adjustment

1. Receive a good CATV channel.
2. Adjust the S502 so that the picture is centered.

Side Pincushion Adjustment

1. Receive a good CATV channel or crosshatch pattern signal.
2. Adjust the R676 so that the outermost line on the screen is straight.

Horizontal Size Adjustment

1. Receive a good CATV channel or crosshatch pattern signal.
2. Adjust the R678 so that the best horizontal size.

Energy Save Offset Adjustment

1. Enter the service mode and select the service adjustment "S20".
2. Adjust data value to "23".

Note : This position is used to preset the level for the energy save function.

Other Adjustments

1. Enter the service mode.
2. Adjust the following data values as listed below.

SERVICE POSITION	ADJUST ITEM	DATA (Hex)
S05	SHARPNESS	24
S06	V-PHASE	00
S16	TRAP	01
S20	E-SAVE	23
S21	TIMER	7A
S23	TUNER SETUP	00
S22	FAO	25
S28	COL. TEMP. LOW-G	E1
S29	COL. TEMP. LOW-B	AE
S30	COL. TEMP. ML-G	FA
S31	COL. TEMP. ML-B	E7
S32	COL. TEMP. ML-B	08
S33	COL. TEMP. HIGH-G	14

SERVICE POSITION	32R-S50, 36R-S50	32R-S400, 36R-S400, CR32S40
OP1	B1	B7
OP2	C7	E7

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.
   Monaural signal : 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads 490 ±10 mVrms.

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100µF, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02"
5. Adjust the data so that the frequency counter reads 62.94 ±0.75kHz.

Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001 .
   Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data until "OK" appears in position on the screen. Make sure the "OK" is displayed almost at the center of the data range.

Separation Adjustment

1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.
   Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the RMS voltmeter is minimum.
5. Receive the following composite stereo signal 2.
   Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the RMS voltmeter is minimum.
8. Take the above steps 1 thru 7 again for fine adjustment.

■ P-IN-P ADJUSTMENT

(Only for 32R-S400, 36R-S400, CR32S40)

P-IN-P Y-LEVEL Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P01".
3. Adjust "P01" data value to obtain normal contrast level.

P-IN-P TINT Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P02".
3. Adjust data value to "29".

P-IN-P COLOR Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position.
3. Enter the service mode and select service adjustment "P03".
4. Adjust "P03" data value to obtain normal color level.

P-IN-P Y-OFF SET Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P04".
3. Adjust data value to "09".

P-IN-P H-POSITION Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P05".
3. Adjust data value to "0A".

P-IN-P BURST GATE PULSE (for MAIN)

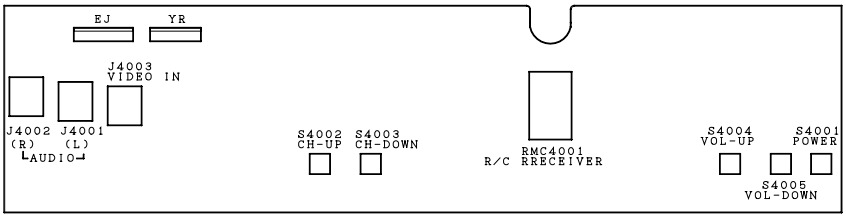
1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P06".
3. Adjust data value to "00".

P-IN-P FREERUN

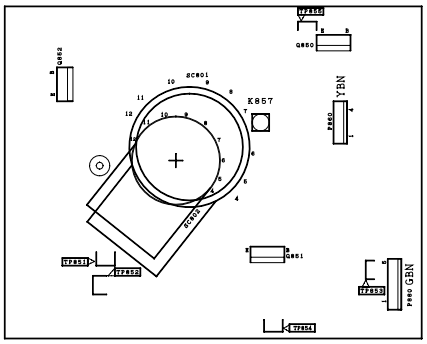
1. Receive a good local channel.
2. Enter the service mode and select service adjustment "P07".
3. Adjust data value to "0B".

MODELS 32R-S50, 36R-S50 CHASSIS LAYOUT

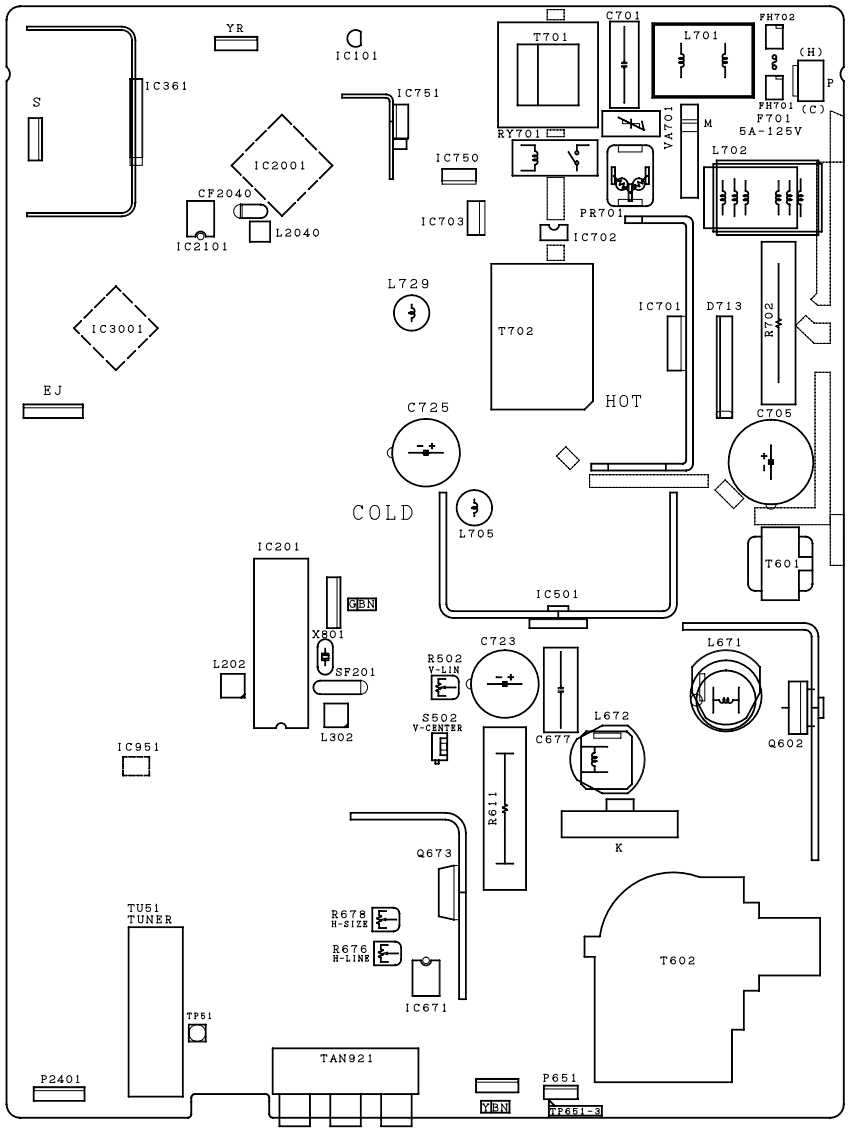
PWB-F



PWB-B

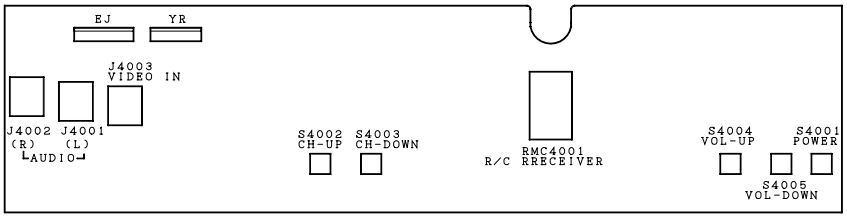


PWB-A

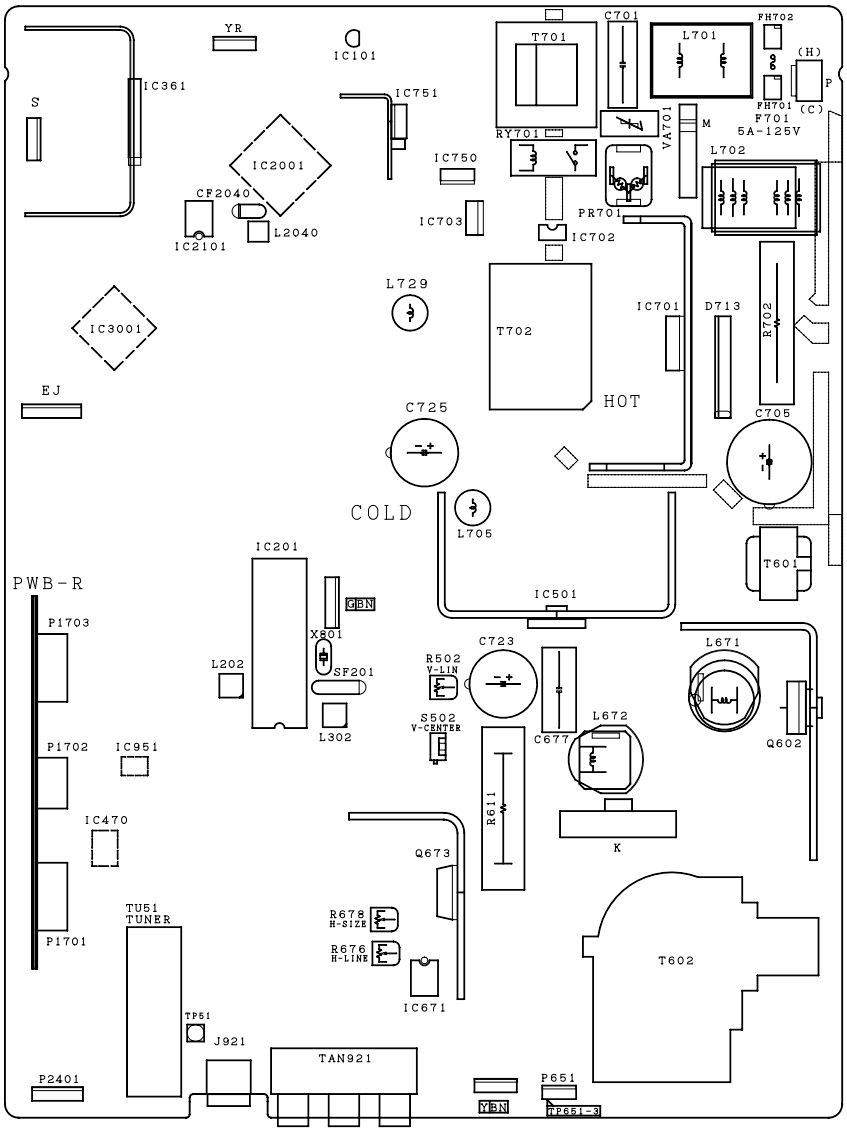


MODELS 32R-S400, 36R-S400, CR32S40 CHASSIS LAYOUT

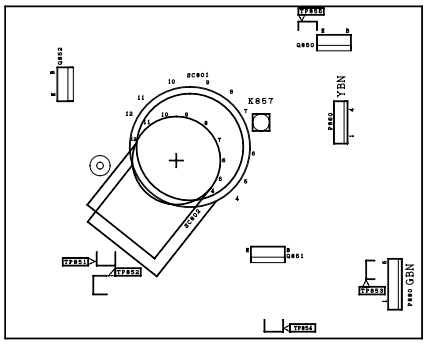
PWB-F



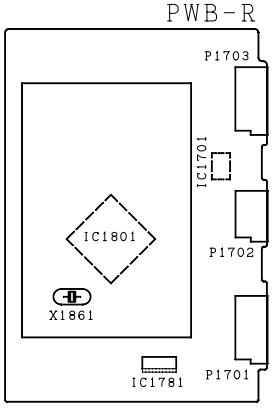
PWB-A



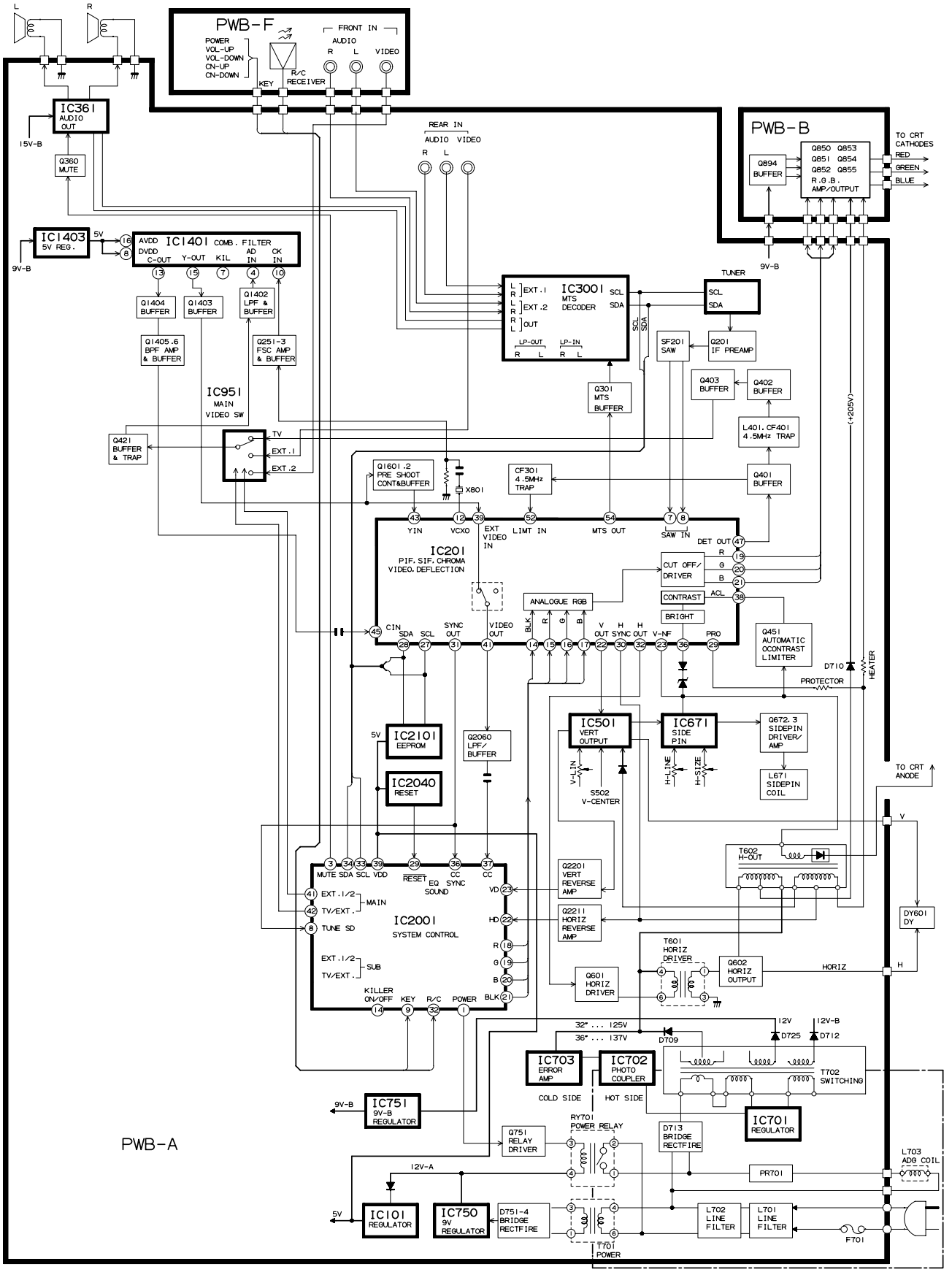
PWB-B



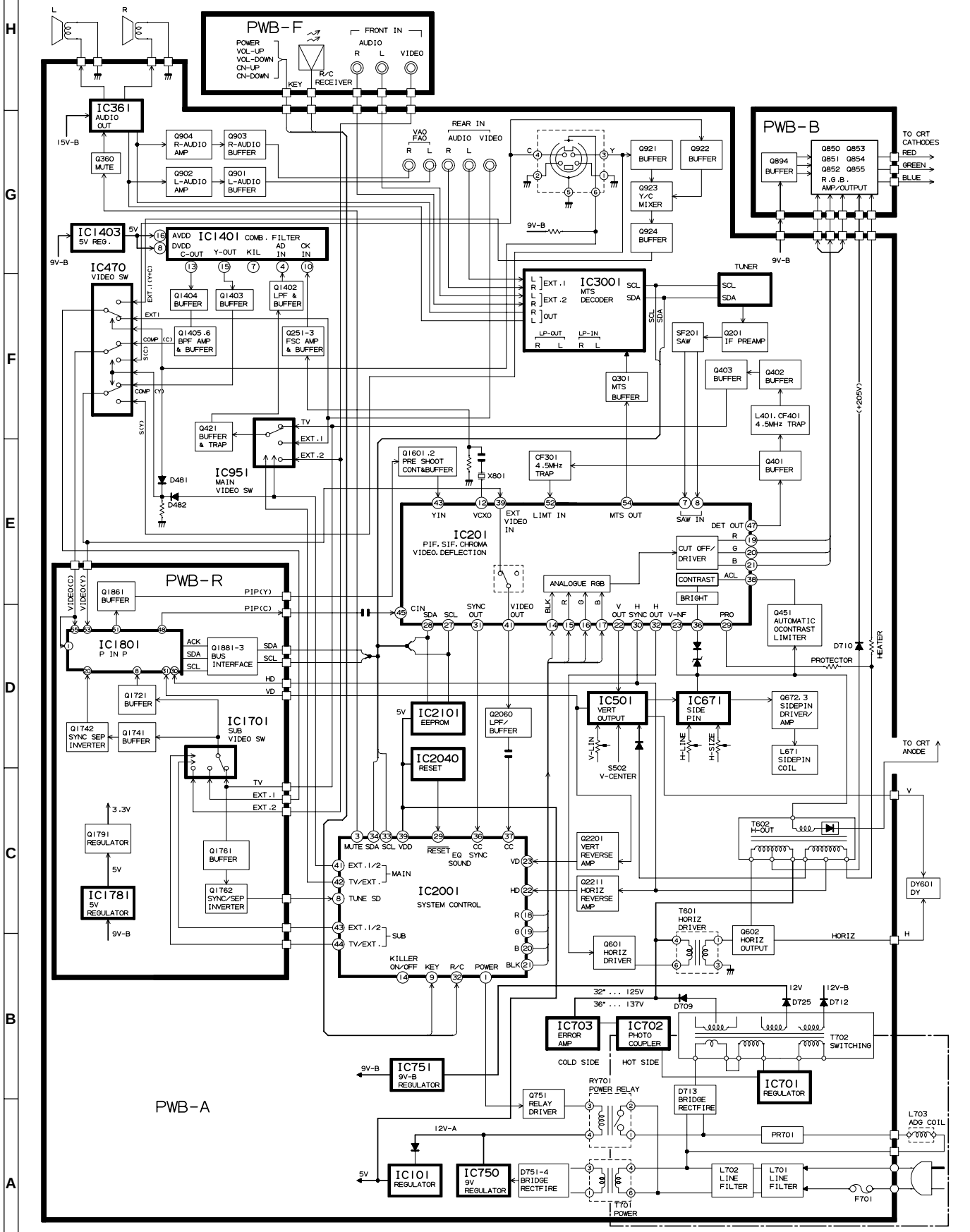
PWB-R



MODELS 32R-S50, 36R-S50 BLOCK DIAGRAM



MODELS 32R-S400, 36R-S400, CR32S40 BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. *The unit of resistance "ohm" is omitted. (K=kΩ=1000Ω, M=MΩ)*
2. *All resistors are 1/8 watt, unless otherwise noted.*
3. *All capacitors are μ F, unless otherwise noted. (P=pF=μμF)*
4. *(G) indicates ±2% tolerance may be used.*
5. *⏚ indicates line isolated ground.*

VOLTAGE MEASUREMENT CONDITIONS:

1. *All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.*
2. *All voltages measured with 1000μ V B & W or Color signal.*

WAVEFORM MEASUREMENT CONDITIONS:

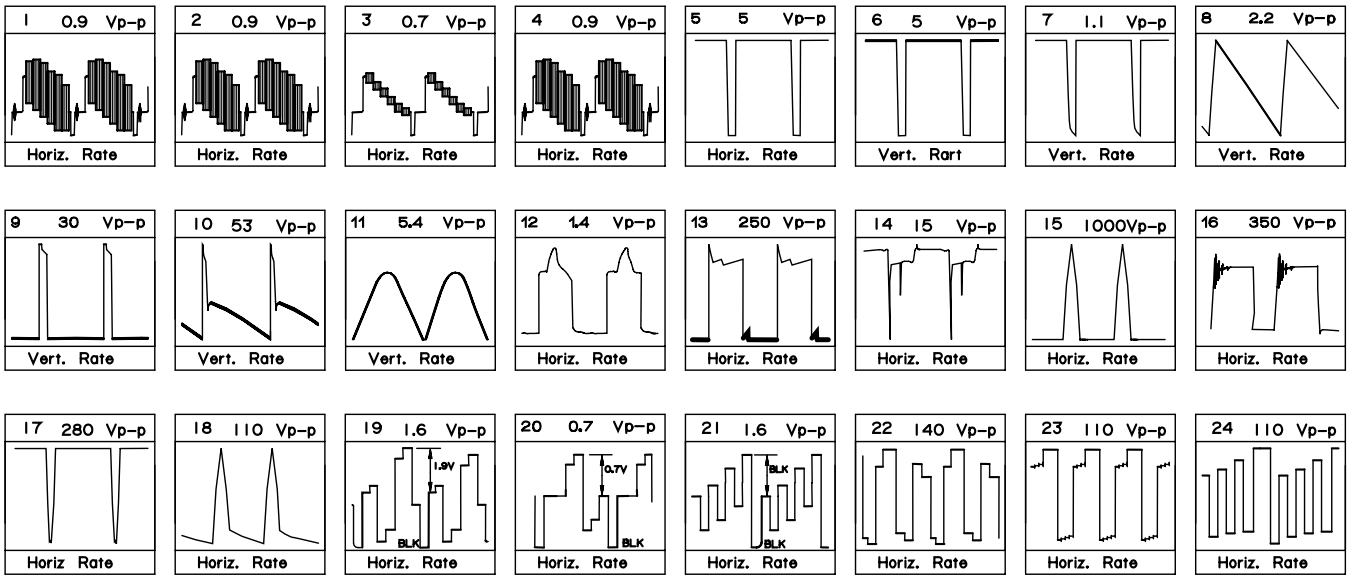
1. *Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.*
2. *indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)*

⚠ AND SHADED ( ) COMPONENTS = SAFETY RELATED PARTS.
▲MARK= X-RAY RELATED PARTS.

DRGANNES MARQUES ⚠ ET HACHRES ( ): PIECES RELATIVES A LA SECURITE.
MARQUE ▲ : PIECS RELATIVE AUX RAYONS X.

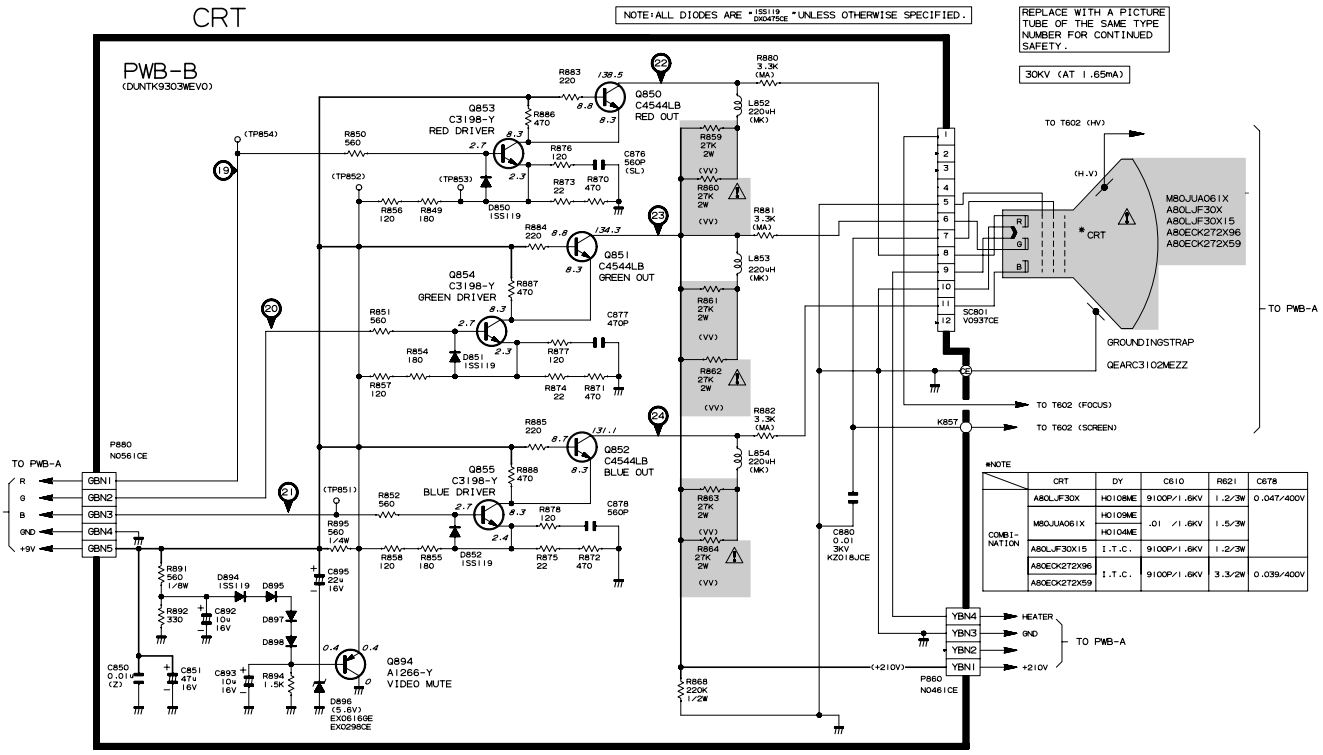
This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVEFORMS

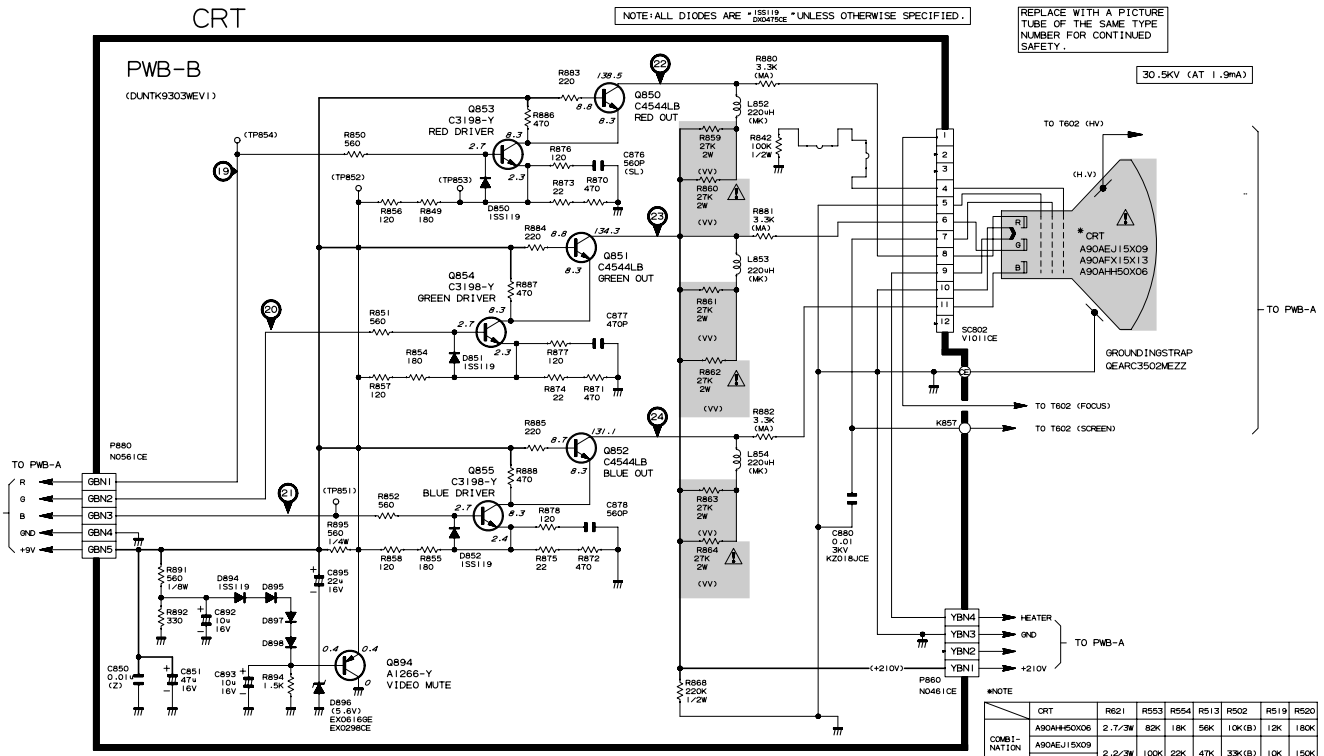


SCHEMATIC DIAGRAM: CRT Unit

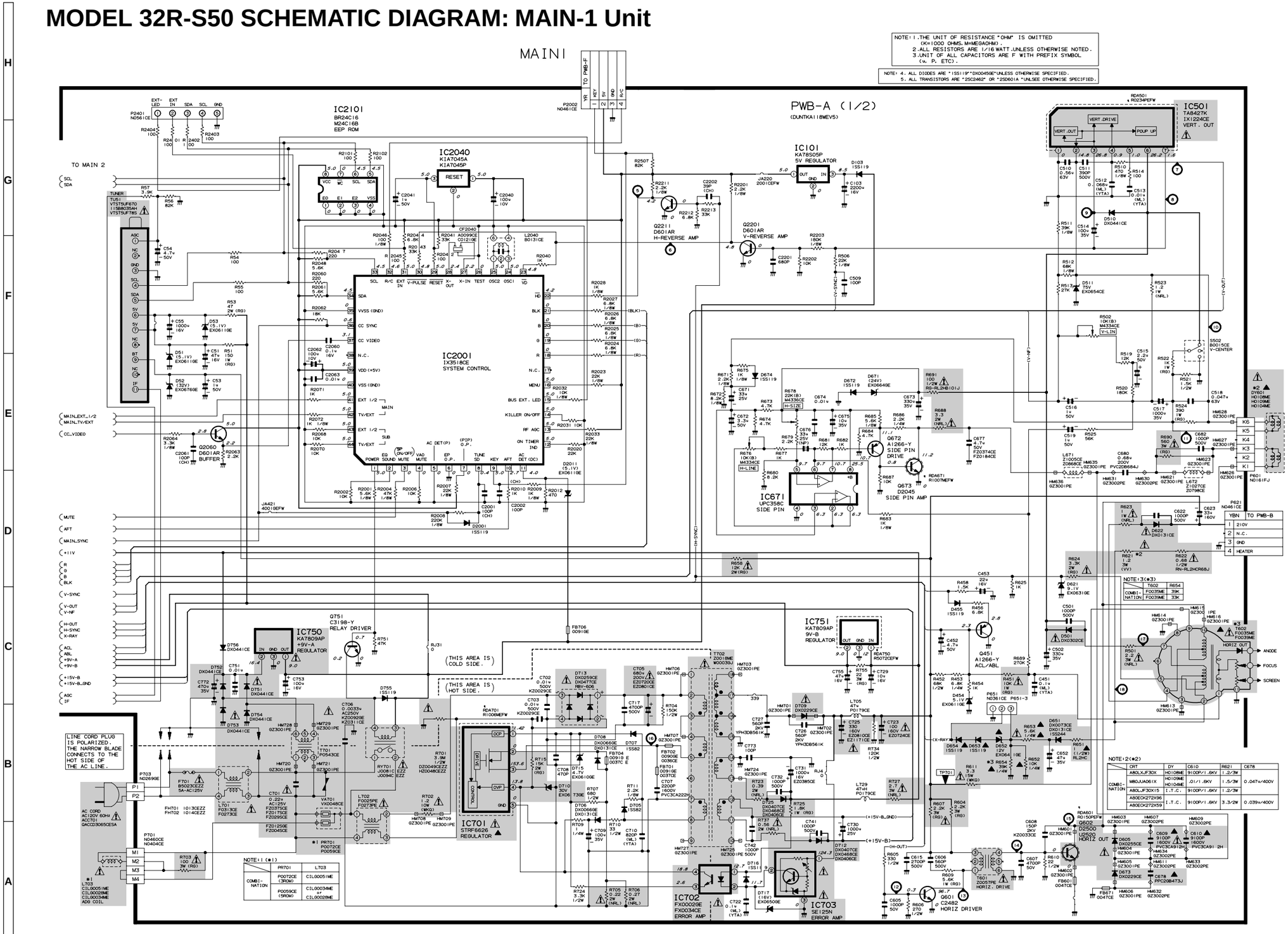
MODELS 32R-S50, 32R-S400, CR32S40



MODELS 36R-S50, 36R-S400



MODEL 32R-S50 SCHEMATIC DIAGRAM: MAIN-1 Unit



MODEL 32R-S50 SCHEMATIC DIAGRAM: MAIN-2 Unit

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).

NOTE: 4. ALL DIODES ARE "1SS119" "DX00450E" UNLESS OTHERWISE SPECIFIED.
5. ALL TRANSISTORS ARE "2SC2462" OR "2SD601A" UNLESS OTHERWISE SPECIFIED.

MAIN2

PWB-A(2/2)
(DUNTKA118WEV5)

IC3001
CXA2074Q
M.T.S.

IC1403
KA78L05B
5V REG.

IC1401
TC90A45F
COMB.FILTER

IC951
MM1113XF
MAIN VIDEO SW.

IC361
IX1135CE
AUDIO OUT

IC201
PIF.SIF.CHROMA
IX3253CE
VIDEO.DEFRECTION

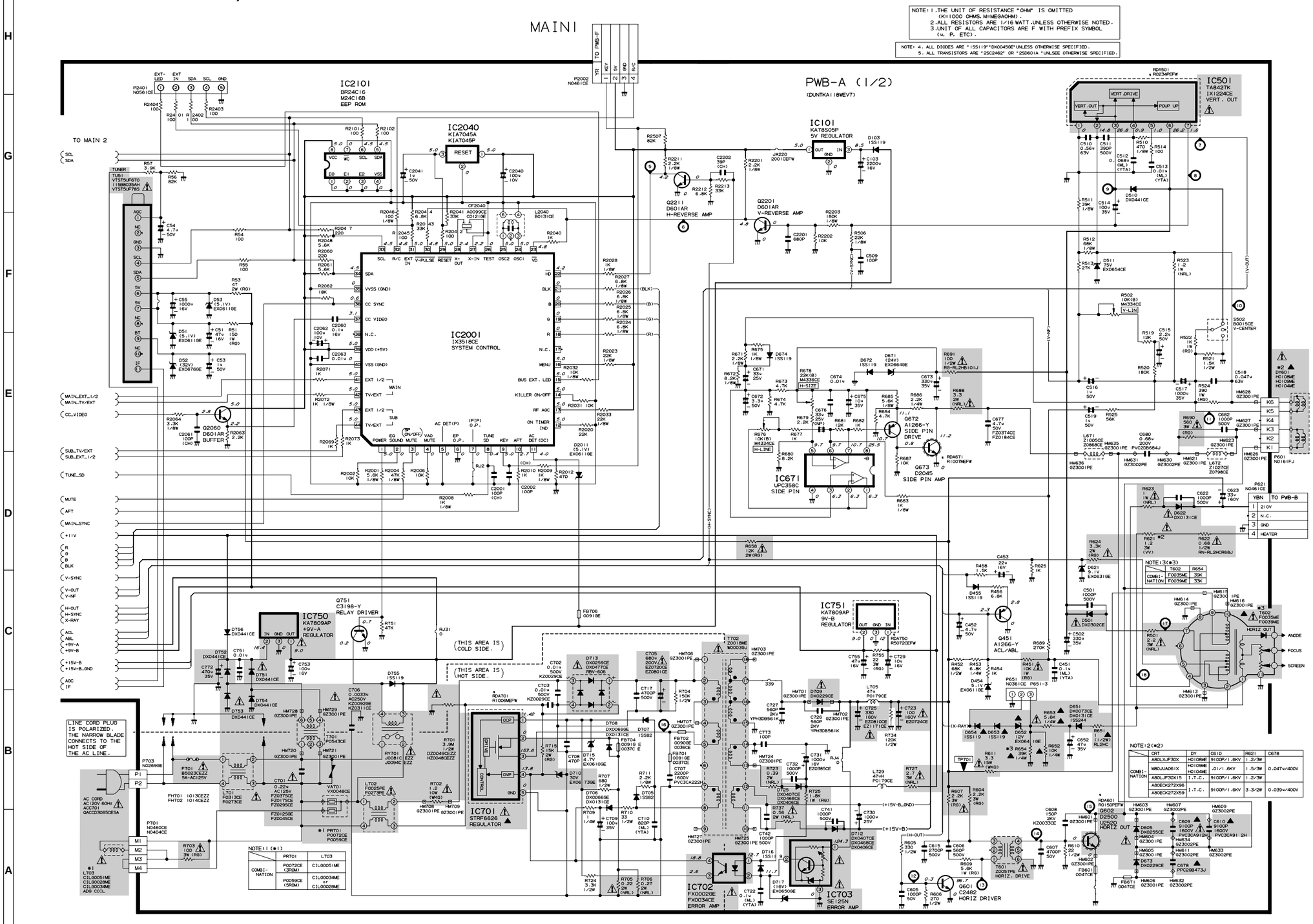
Q1405 D601AR AMP
Q1406 D601AR BUFFER
Q1404 D601AR BUFFER
Q1403 D601AR BUFFER
Q1402 D601AR BUFFER
Q402 B709AR BUFFER
Q403 D601AR BUFFER
Q401 D601AR BUFFER
Q421 B709AR BUFFER
Q253 D601AR BUFFER
Q252 D601AR FSC AMP
Q251 D601AR AMP
Q1602 B709AR Y-BUFFER
Q1601 D601AR PRE-SHOOT CONTROL
Q301 D601AR MTS BUFFER
Q201 C2735 IF PREAMP
Q360 D601AR MUTE

TO MAIN 1
SCL
SDA
V-SYNC
TUNE_SD
SUB_TV/EXT
SUB_EXT_1/2
MAIN_EXT_1/2
MAIN_TV/EXT
+11V
H-SYNC
AFT
CC_VIDEO
ACL
ABL
+9V-B
H-OUT
MAIN_SYNC
X-RAY
V-NF
V-OUT
BLK
B
G
R
IF
ABC
+9V-A
MUTE
+15V-B
+15V-B_GND

TO PWB-G
R
GND
L
GND
VIDEO
GND

GBN
+9V-B
GND
B
G
R

MODELS 32R-S400, CR32S40 SCHEMATIC DIAGRAM: MAIN-1 Unit


MAIN1
NOTE:1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT.UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).
NOTE: 4. ALL DIODES ARE "1SS119" "DX00450E" UNLESS OTHERWISE SPECIFIED.
5. ALL TRANSISTORS ARE "2SC2462" OR "2SD601A" UNLESS OTHERWISE SPECIFIED.
PWB-A (1/2)
(DUNTKA118WEVT)
IC2101 BR24C16 M24C16B EEP ROM
IC2040 KIA7045A KIA7045P RESET
IC2001 IX3518CE SYSTEM CONTROL
IC701 STRF6626 REGULATOR
IC1101 KA78S05P 5V REGULATOR
IC501 TA8427K IX1224CE VERT. OUT
IC671 UPC358C SIDE PIN
IC750 KA7809AP +9V-A REGULATOR
IC751 KA7809AP 9V-B REGULATOR
IC702 FX0002CE FX0034CE ERROR AMP
IC703 SE125N ERROR AMP
Q2201 D601AR H-REVERSE AMP
Q2301 D601AR V-REVERSE AMP
Q2060 D601AR BUFFER
Q672 A1266-Y SIDE PIN DRIVE
Q673 D2045 SIDE PIN AMP
Q751 C3198-Y RELAY DRIVER
Q451 A1266-Y ACL/ABL
Q601 C2482 HORIZ DRIVER
Q602 D2500 HORIZ OUT
TO MAIN 2
TUNER
LINE CORD PLUG IS POLARIZED. THE NARROW BLADE CONNECTS TO THE HOT SIDE OF THE AC LINE.
(THIS AREA IS COLD SIDE.)
(THIS AREA IS HOT SIDE.)
NOTE:1(*1)
NOTE:2(*2)
NOTE:3(*3)
TO PWB-B
ANODE
FOCUS
SCREEN
HORIZ OUT

MODELS 32R-S400, CR32S40 SCHEMATIC DIAGRAM: MAIN-2 Unit

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).

NOTE: 4. ALL DIODES ARE "1SS119" "DX00450E" UNLESS OTHERWISE SPECIFIED.
5. ALL TRANSISTORS ARE "2SC2462" OR "2SD601A" UNLESS OTHERWISE SPECIFIED.

MAIN2

PWB-A(2/2)

(DUNTKAI1BWEV7)

IC3001 CXA2074Q M.T.S.

IC1403 KA78L05B 5V REG.

IC1401 TC90A45F COMB.FILTER

IC951 MM1113XF MAIN VIDEO SW.

IC361 IX1135CE AUDIO OUT

IC470 M52055FP VIDEO SW

IC201 PIF.SIF.CHROMA IX3253CE VIDEO.DEFRECTION

Q1405 D601AR AMP

Q1406 D601AR BUFFER

Q1404 D601AR BUFFER

Q1403 D601AR BUFFER

Q921 D601AR BUFFER

Q923 D601AR Y/C MIX

Q922 D601AR BUFFER

Q924 D601AR BUFFER

Q402 BT09AR BUFFER

Q403 D601AR BUFFER

Q1402 D601AR BUFFER

Q401 D601AR BUFFER

Q421 B709AR BUFFER

Q253 D601AR BUFFER

Q902 D601AR L-AUDIO AMP

Q901 D601AR L-AUDIO BUFFER

Q903 D601AR R-AUDIO BUFFER

Q904 D601AR R-AUDIO AMP

Q360 D601AR MUTE

Q252 D601AR FSC AMP

Q251 D601AR AMP

Q1602 BT09AR Y-BUFFER

Q1601 D601AR PRE-SHOOT CONTROL

Q301 D601AR MTS BUFFER

Q201 C2735 IF PREAMP

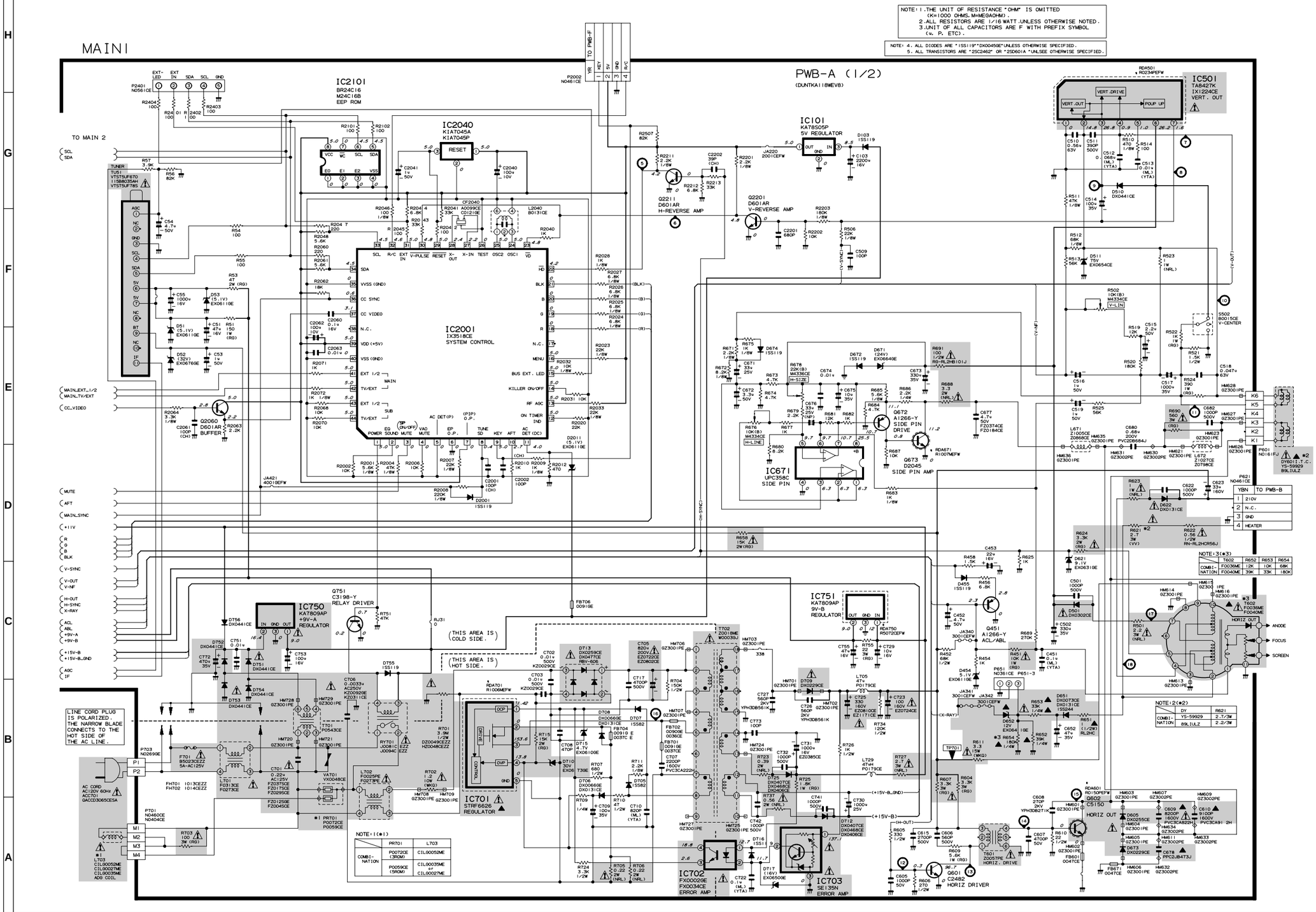
PWB-R PinP MODULE

TO MAIN 1

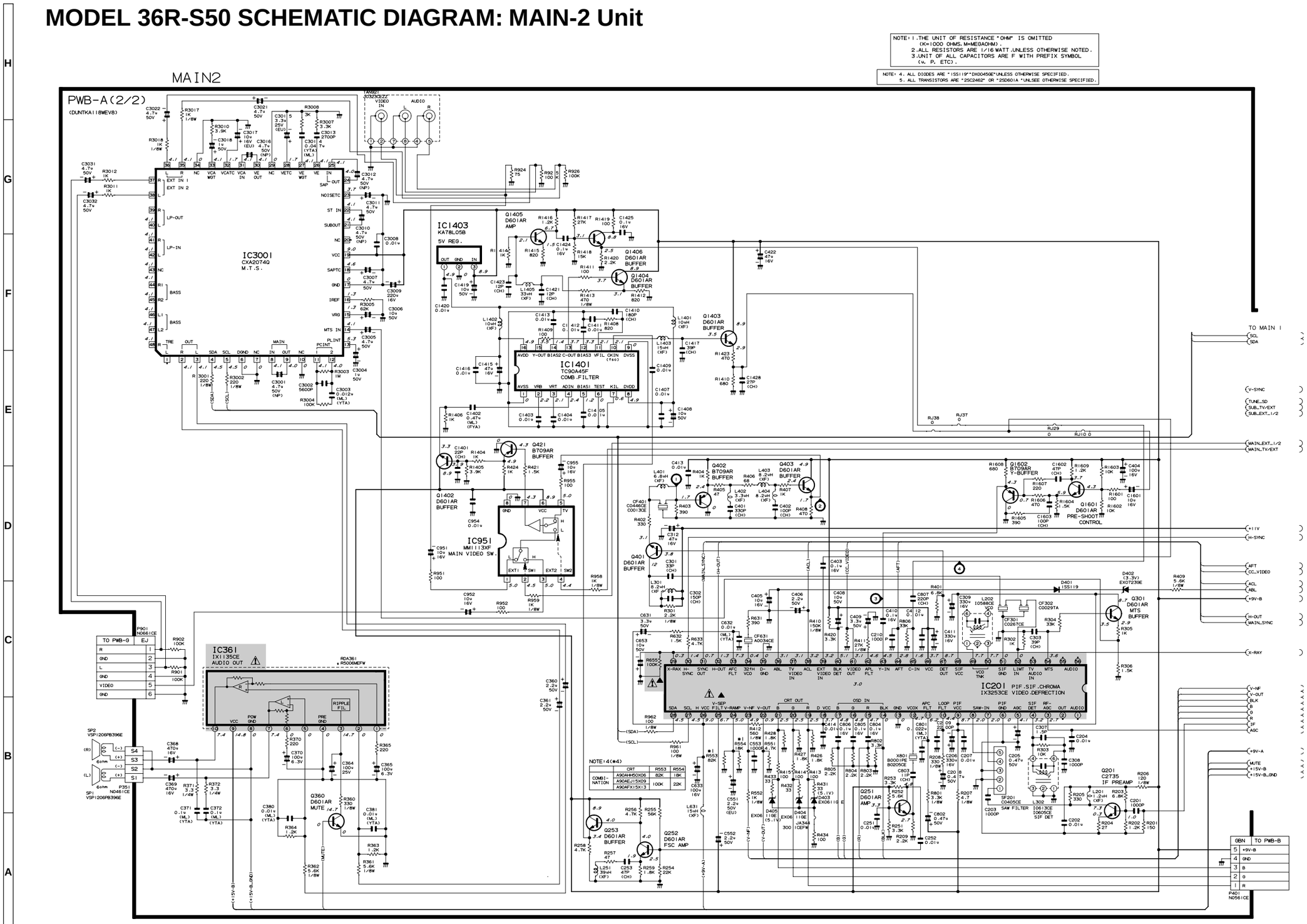
TO PWB-G

TO PWB-B

MODEL 36R-S50 SCHEMATIC DIAGRAM: MAIN-1 Unit



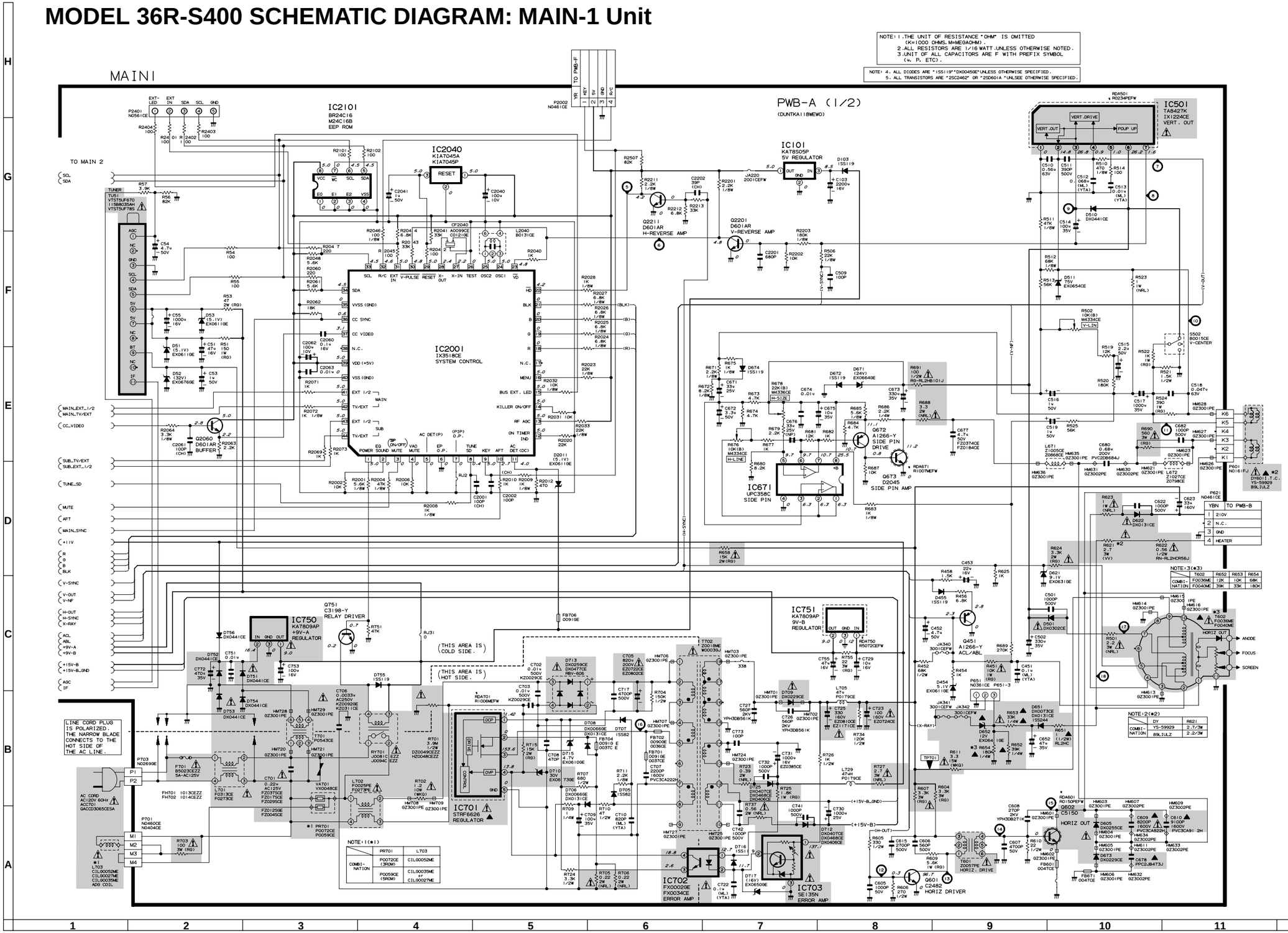
MODEL 36R-S50 SCHEMATIC DIAGRAM: MAIN-2 Unit



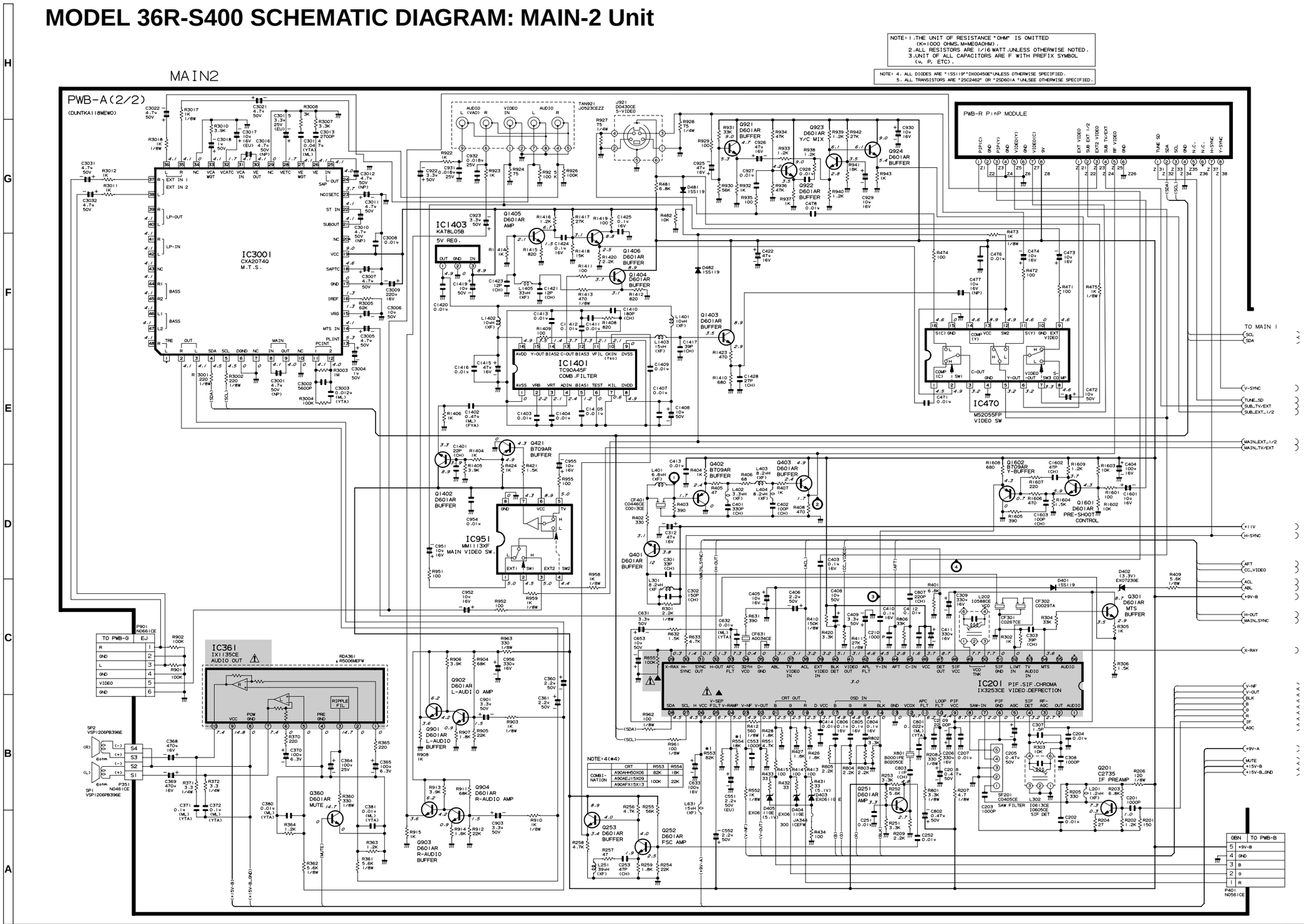
TO PWB-G	EJ
R	1
GND	2
L	3
GND	4
VIDEO	5
GND	6

GBN	TO PWB-B
5	+9V-B
4	GND
3	B
2	G
1	R

MODEL 36R-S400 SCHEMATIC DIAGRAM: MAIN-1 Unit


MAIN1
PWB-A (1/2)
(DUNTKA118WEWO)
NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT.UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).
NOTE: 4. ALL DIODES ARE "1SS119"*DX00458E"UNLESS OTHERWISE SPECIFIED.
5. ALL TRANSISTORS ARE "2SC2462" OR "2SD601A "UNLSEE OTHERWISE SPECIFIED.
IC2101 BR24C16 M24C16B EEP ROM
IC2040 KIA7045A KIA7045P
IC1101 KA78S05P 5V REGULATOR
IC501 TA8427K IX1224CE VERT. OUT
IC2001 IX3518CE SYSTEM CONTROL
IC671 UPC358C SIDE PIN
IC750 KA7809AP +9V-A REGULATOR
IC751 KA7809AP 9V-B REGULATOR
IC701 STRF6626 REGULATOR
IC702 FX00026E FX0034CE ERROR AMP
IC703 SE135N ERROR AMP
Q2060 D601AR BUFFER
Q2201 D601AR V-REVERSE AMP
Q2211 D601AR H-REVERSE AMP
Q751 C3198-Y RELAY DRIVER
Q671 A1266-Y SIDE PIN DRIVE
Q673 D2045 SIDE PIN AMP
Q601 C2482 HORIZ DRIVER
Q451 A1266-Y ACL/ABL
TO MAIN 2
TO PWB-F
TO PWB-B
LINE CORD PLUG IS POLARIZED. THE NARROW BLADE CONNECTS TO THE HOT SIDE OF THE AC LINE.
(THIS AREA IS COLD SIDE.)
(THIS AREA IS HOT SIDE.)
HORIZ OUT
ANODE
FOCUS
SCREEN
NOTE:2(*2)
NOTE:3(*3)
NOTE:1(*1)

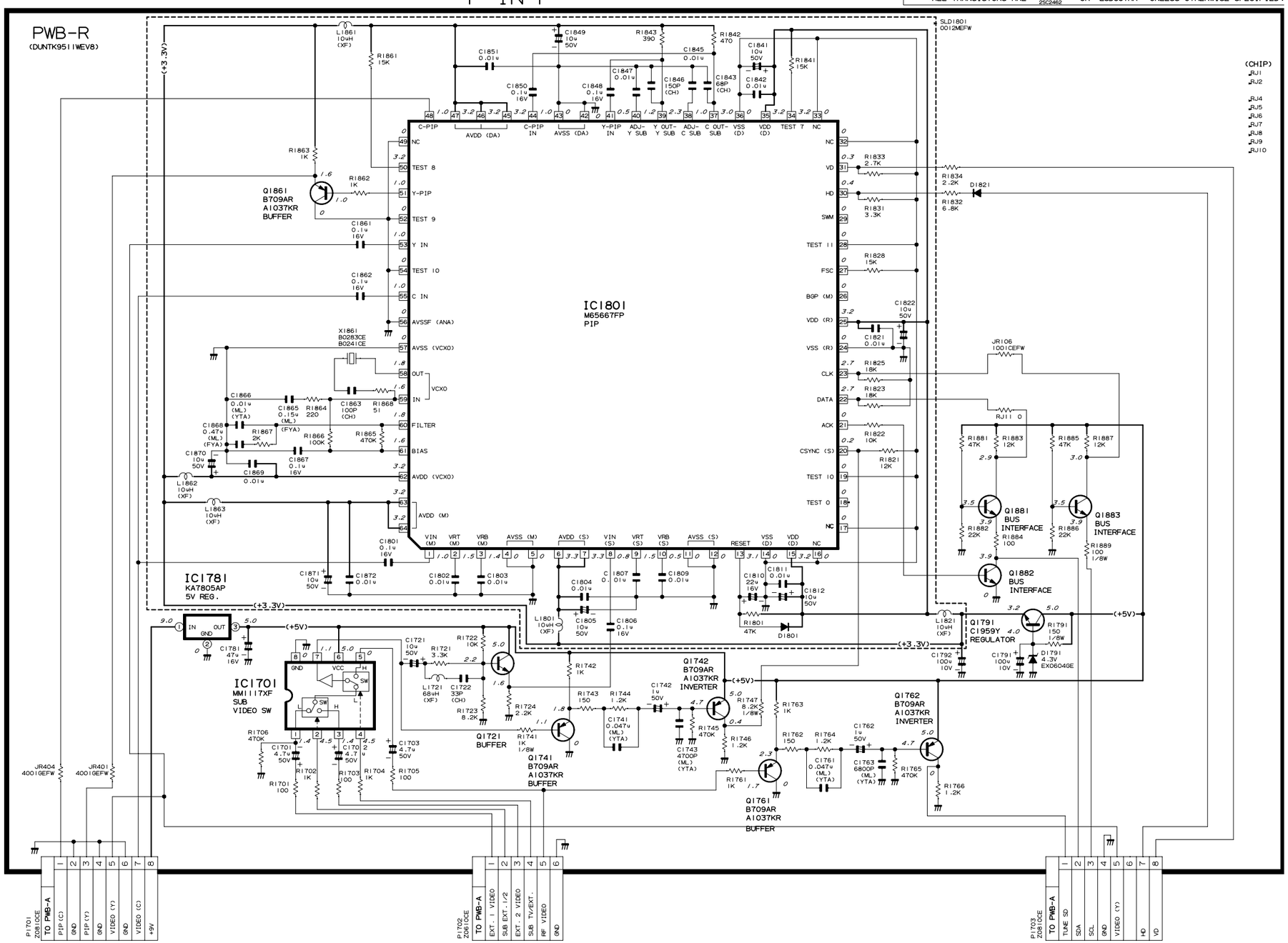
MODEL 36R-S400 SCHEMATIC DIAGRAM: MAIN-2 Unit



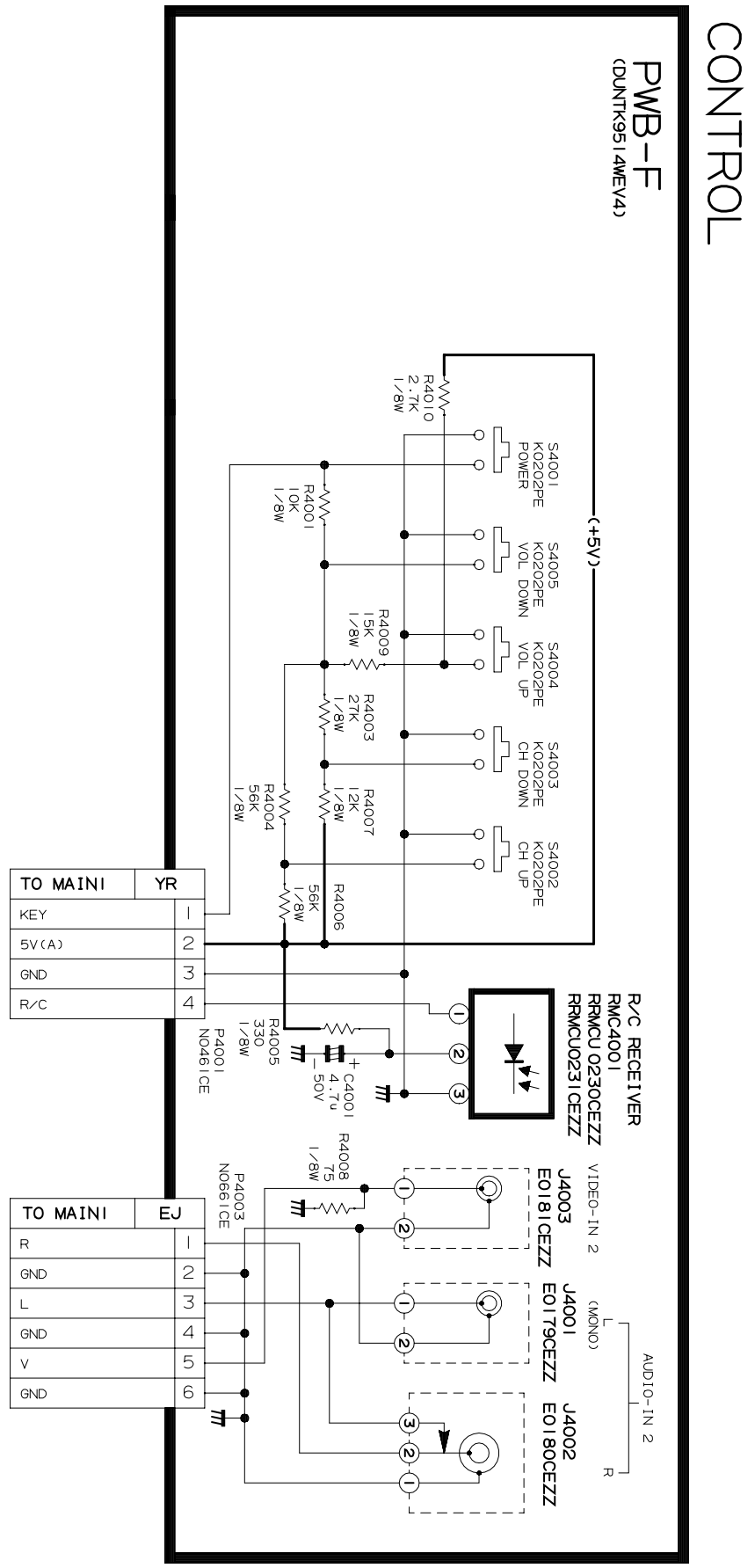
MODELS 32R-S400, 36R-S400, CR32S40 SCHEMATIC DIAGRAM: P-IN-P Unit

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT.UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

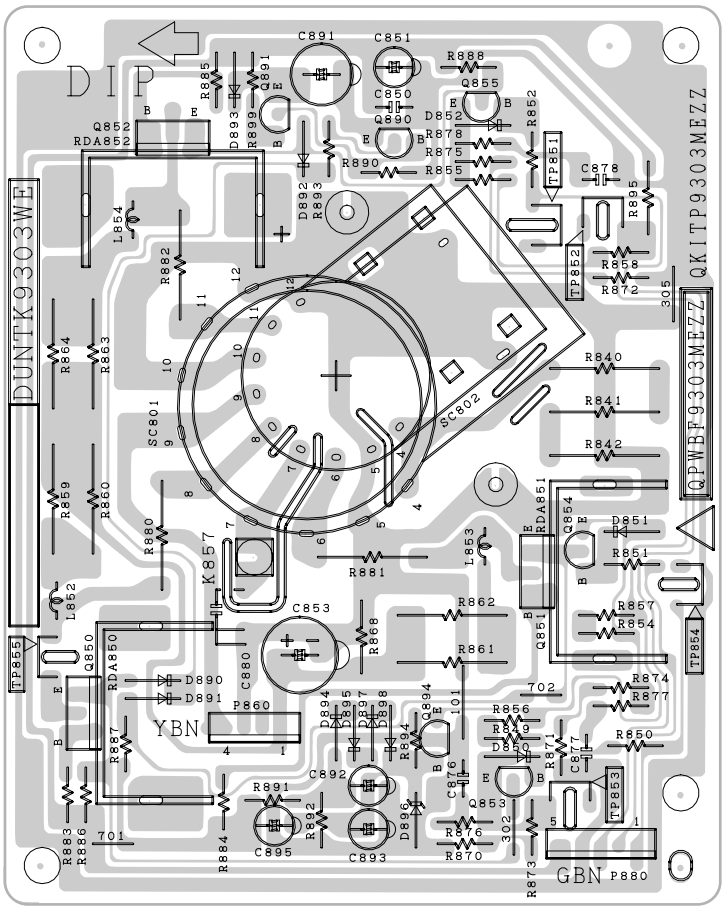
NOTE: ALL DIODES ARE " 1SS119 / DX0475CE " UNLESS OTHERWISE SPECIFIED.
: ALL TRANSISTORS ARE " 2SC2412 / 2SC2462 " OR "2SD601AR" UNLESS OTHERWISE SPECIFIED.



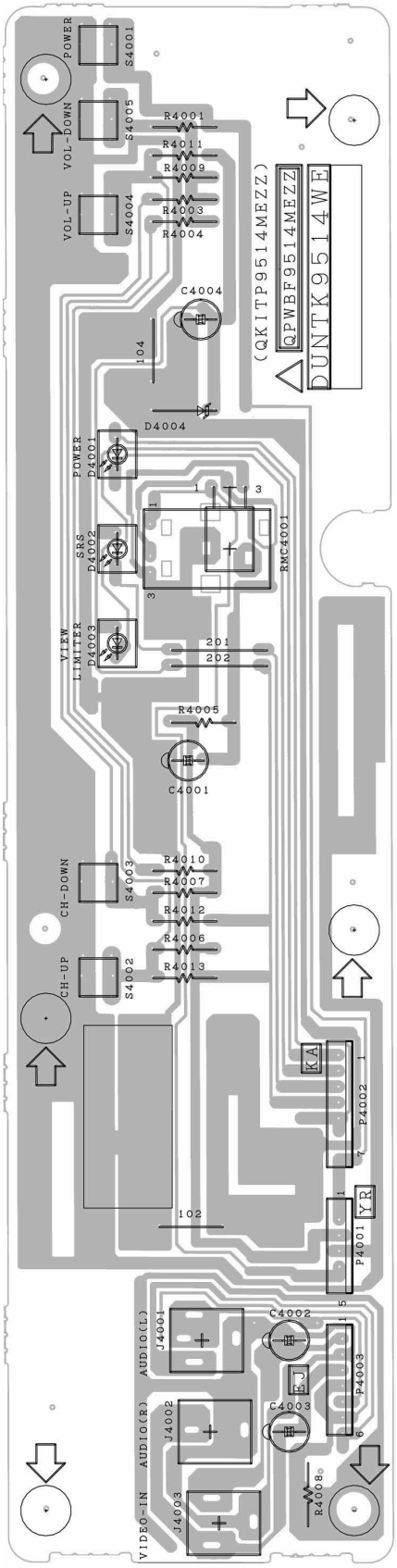
SCHEMATIC DIAGRAM: CONTROL Unit



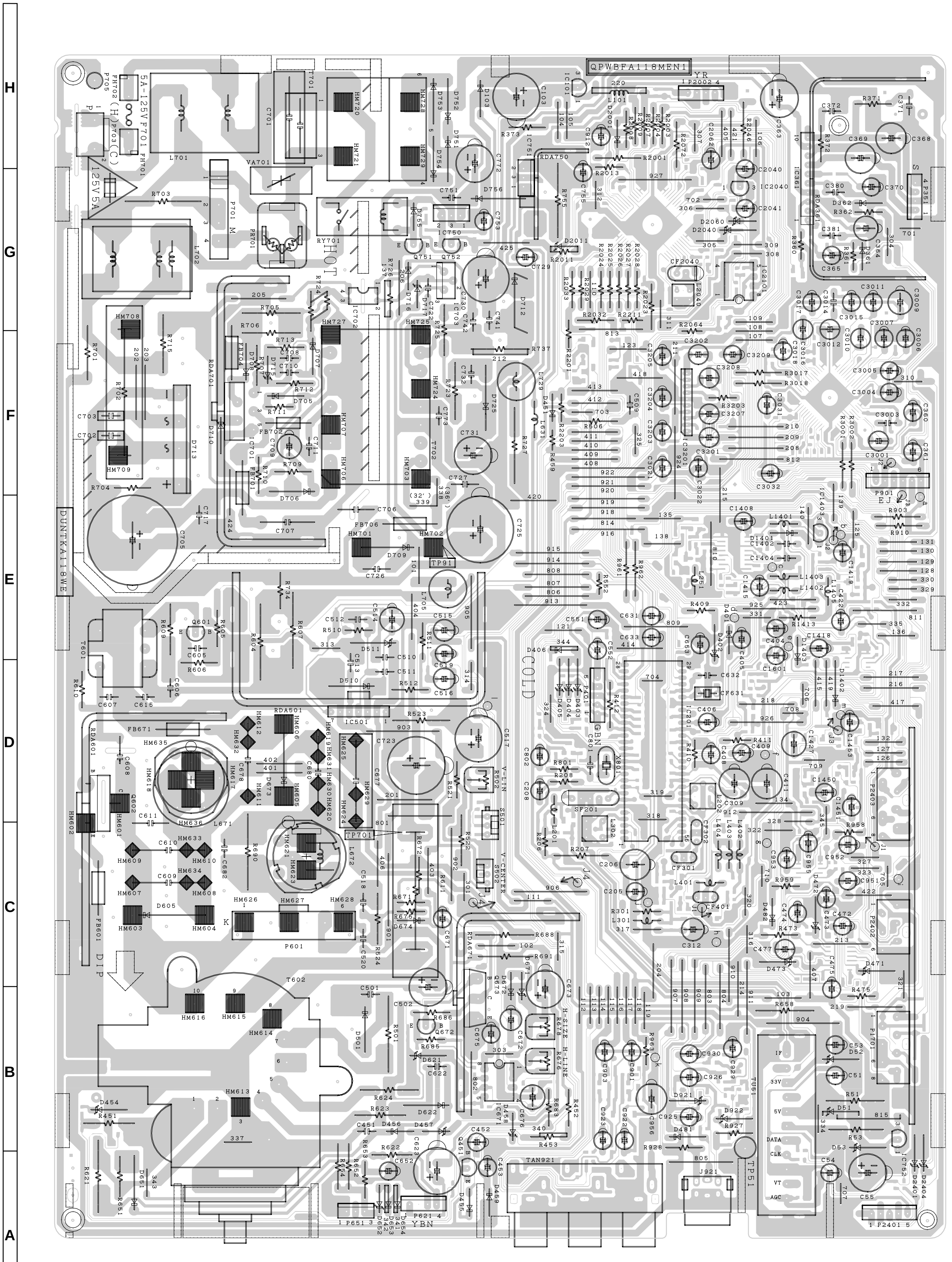
PRINTED WIRING BOARD ASSEMBLIES



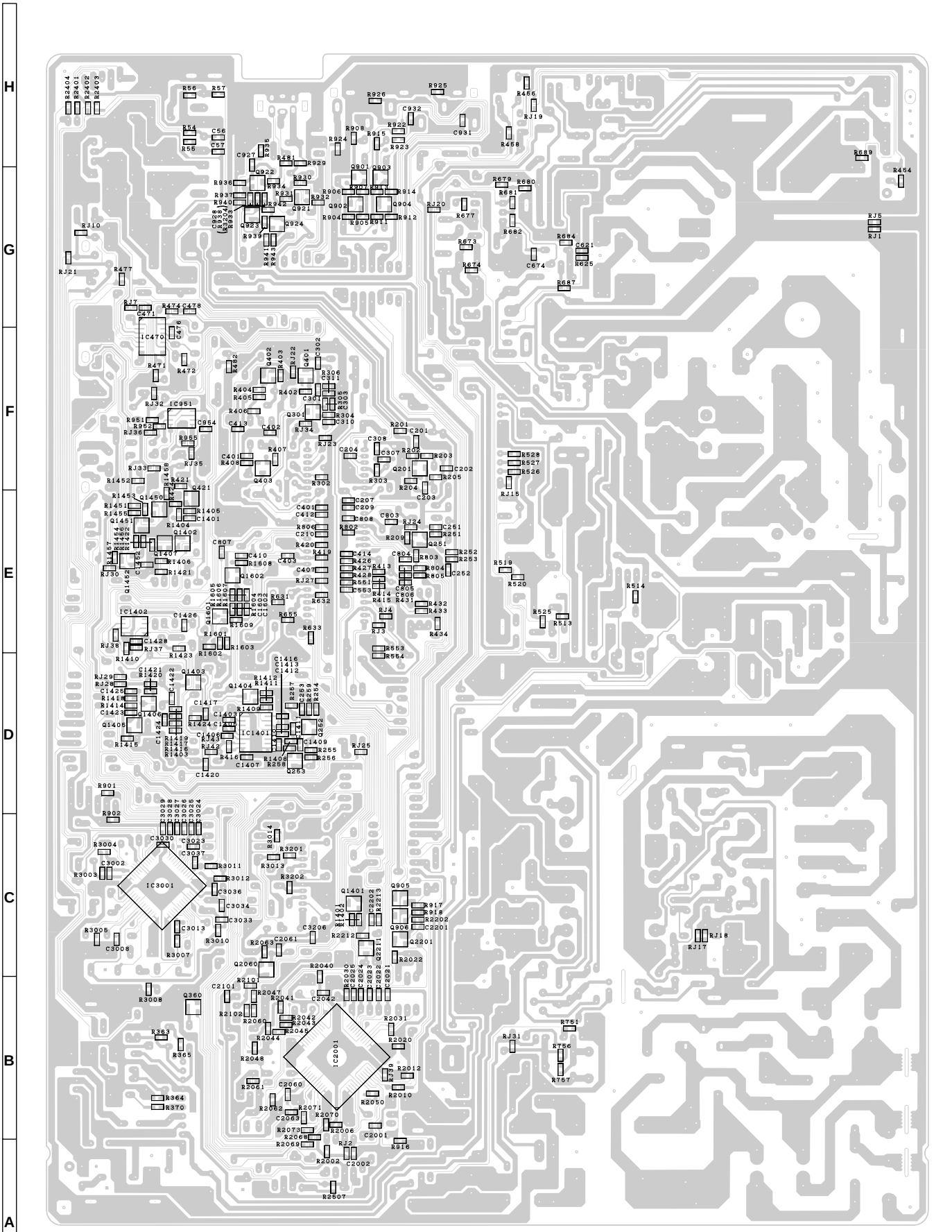
PWB-B: CRT Unit (Wiring Side)



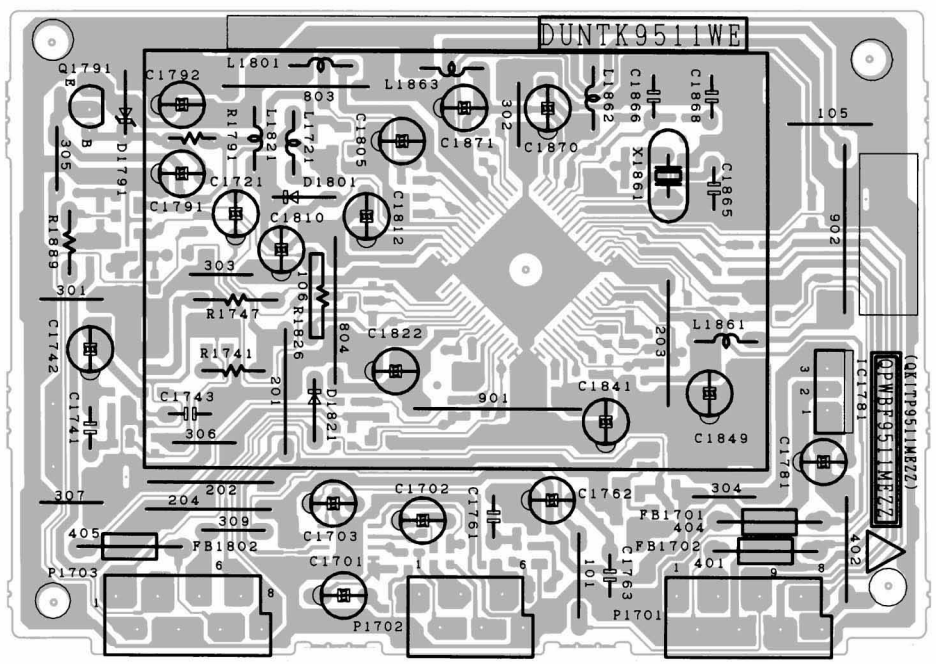
PWB-F: CONTROL Unit (Wiring Side)


QPWBFA118MEN1
DUNTKA118WE
HOT
COLD
DIP
YR
YBN
GBN
EJ
TU51
IF
33V
5V
DATA
CLK
VT
AGC
TAN921
J921
TP51
TP91
TP701
IC501
IC201
IC2040
IC2101
IC3201
IC361
IC701
IC702
IC703
IC750
IC751
IC752
T601
T602
T701
T702
P601
P2401
P2402
P2403
P1701
P901
P351
P401
P2002
P621
P651
P701
F701
5A-125V
125V 5A
H-SIZE
H-LINE
V-LIN
V-CENTER
A
B
C
D
E
F
G
H
1
2
3
4
5
6

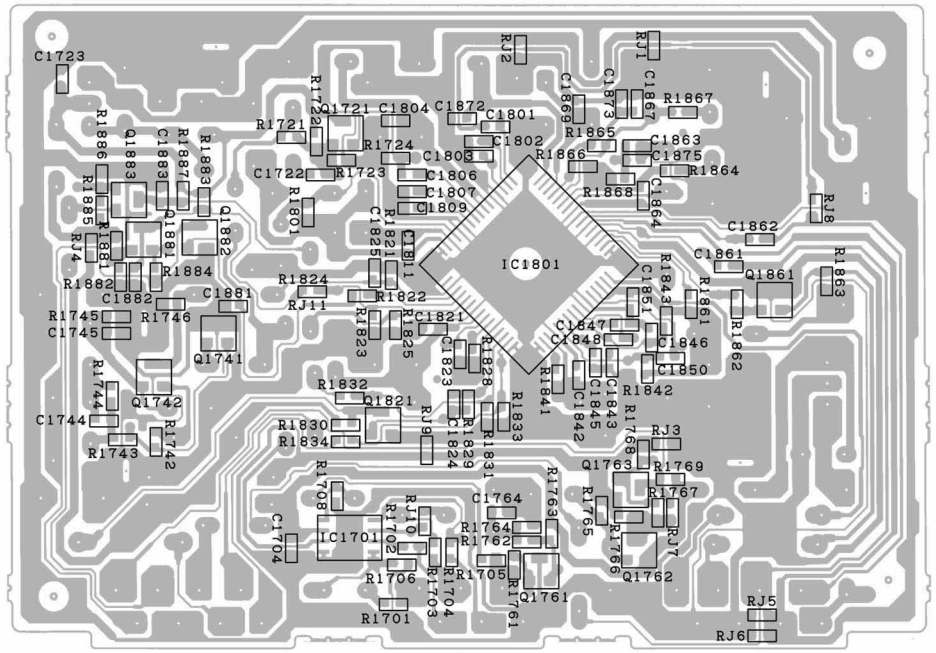
PWB-A: MAIN Unit (Wiring Side)



PWB-A: MAIN Unit (Chip Parts Side)



PWB-R: P-IN-P Unit (Wiring Side)
(Only for 32R-S400, 36R-S400, CR32S40)



PWB-R: P-IN-P Unit (Chip Parts Side)
(Only for 32R-S400, 36R-S400, CR32S40)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK : X- RAY RELATED PARTS

LISTE DES PIECES

CHANGE DES PIECES

Les pi`eces de rechange qui pr élelesentent ces caract éleristiques sp éleciales de s élecurit éle, sont identifi élees dans ce manuel : les pi`eces élelectriques qui pr élesentent ces particularit éles, sont rep éler élee par la marque ⚠ et sont hachur élees dans les listes de pi`eces et dans les diagrammes sch élematiques.
La substitution d'une pi`ece de rechange par une autre qui ne pr éLesente pas les m éoemes caract éLeristiques de s élecurit éle que la pi`ece recommand élee parl'usine et dans ce manuel de service, peut provoquer une éLelectrocution, un incendie ou toutautre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

1. NUMERO DU MODELE
2. NO. DE REF
3. NO. DE PIECE
4. DESCRIPTION

in **CANADA**: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100

★MARQUE: SECTION LIVRAISON DES PIECES DE RECHANGE

▲ MARQUE : PIECES RELATIVE AUX RAYONS X

PICTURE TUBE

Ref. No.	Part No.	★	Description	Code
			32R-S50, 32R-S400, CR32S40	
⚠	VB80LJF3015∗S	X	CRT (I.T.C.)	CR
	or			
	VB80ECK272X1E		CRT (I.T.C.)	
	or			
	VB80ECK272X2E		CRT (I.T.C.)	
	or			
	VB80LJF30X/∗S		CRT (DY601:H0108ME)	
	or			
	VB80JUA061X∗S		CRT (DY601:H0109ME or H0104ME)	
▲⚠ DY601	RCiLH0108MEZZ	X	DY (CRT:A80LJF30X)	AZ
	or			
	RCiLH0109MEZZ		DY (CRT:A80JUA061X)	
	or			
	RCiLH0104MEZZ		DY (CRT:A80JUA061X)	
⚠ L703	RCiLG0051MEZZ	X	Degaussing Coil (PR701:P0072CE)	AV
	or			
	RCiLG0028MEZZ		Degaussing Coil (PR701:P0059CE)	
	or			
	RCiLG0034MEZZ		Degaussing Coil (PR701:P0059CE)	
	MSPRT0002MEZZ	X	Spring for CRT	AE
	QEARC3102MEZZ	X	Grounding Strap	AG

	CRT	DY	C610	R621	C678
COMBI-NATION	A80LJF30X	H0108ME	9100P/1.6KV	1.2/3W	0.047/400V
	M80JUA061X	H0109ME	.01 /1.6KV	1.5/3W	
		H0104ME			
	A80LJF30X15	I.T.C.	9100P/1.6KV	1.2/3W	
	A80ECK272X96	I.T.C.	9100P/1.6KV	3.3/2W	0.039/400V
	A80ECK272X59				

	PR701	L703
COMBI-NATION	P0072CE (3ROM)	CILG0051ME
	P0059CE (5ROM)	CILG0034ME or CILG0028ME

Ref. No.	Part No.	★	Description	Code
			36R-S50, 36R-S400	
⚠	VB90AHH5006∗S	X	CRT (I.T.C.)	DD
	or			
	VB90AFX1513∗S		CRT (I.T.C.)	
	or			
	VB90AEJ1509∗S		CRT (I.T.C.)	
⚠ L703	RCiLG0052MEZZ	X	Degaussing Coil (PR702:P0072CE)	AV
	or			
	RCiLG0027MEZZ		Degaussing Coil (PR702:P0059CE)	
	or			
	RCiLG0035MEZZ		Degaussing Coil (PR702:P0059CE)	
	MSPRT0002MEZZ	X	Spring for CRT	AE
	QEARC3502MEZZ	X	Grounding Strap	AG

	CRT	R621	R553	R554	R513	R502	R519	R520
COMBI-NATION	A90AHH50X06	2.7/3W	82K	18K	56K	10K(B)	12K	180K
	A90AEJ15X09	2.2/3W	100K	22K	47K	33K(B)	10K	150K
	A90AFX15X13							

	PR701	L703
COMBI-NATION	P0072CE (3ROM)	CILG0052ME
	P0059CE (5ROM)	CILG0035ME or CILG0027ME

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

PWB-A DUNTKA118WEV5	–	MAIN Unit (32R-S50)	—
PWB-A DUNTKA118WEV7	–	MAIN Unit (32R-S400, CR32S40)	—
PWB-A DUNTKA118WEV8	–	MAIN Unit (36R-S50)	—
PWB-A DUNTKA118WEW0	–	MAIN Unit (36R-S400)	—
PWB-B DUNTK9303WEV0	–	CRT Unit (32R-S50/S400, CR32S40)	—
PWB-B DUNTK9303WEV1	–	CRT Unit (36R-S50/S400)	—
PWB-F DUNTK9514WEV4	–	CONTROL Unit	—
PWB-R DUNTK9511WEV8	–	P-IN-P Unit (32R-S400, 36R-S400, CR32S40)	—

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Ref. No.	Part No.	★	Description	Code
⚠ TU51	VTUVTST5UF670 or VTU115B8035AH or VTUVTST5UF78S	X	Tuner	AX

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC101	VHiKA78S05P-1	J	KA78S05P	AD
▲⚠ IC201	RH-iX3253CEZZ	J	TA1268AN	AV
⚠ IC361	RH-iX1135CEZZ	J	LA4261	AH
IC470	VHiM52055FP-1	J	M52055FP (32R-S400, 36R-S400, CR32S40)	AH
⚠ IC501	VHiTA8427K/-1 or RH-iX1224CEZZ	J	TA8427K	AL
IC671	VHiUPC358C/-1	J	UPC358C	AD
▲⚠ IC701	VHiSTRF66261E	J	STRF6626	AX
⚠ IC702	RH-FX0002GEZZ or RH-FX0034CEZZ	J	PS2501-1	AD
⚠ IC703	VHiSE125N//-1	X	SE125N (32R-S50, 32R-S400, CR32S40)	AK
⚠ IC703	VHiSE135N//-1	J	SE135N (36R-S400, 36R-S50)	AG
⚠ IC750	VHiKA7809AP-1	J	KA7809API	AE
IC751	VHiKA7809AP-1	J	KA7809API	AE
IC951	VHiMM1113XF1E	J	MM1113XFBE	AE
IC1401	VHiTC90A45F-1	J	TC90A45F	AM
IC1403	VHiKA78L05B-1	J	KA78L05BP	AE
IC2001	RH-iX3518CEZZQ	X	I.C.	AT
IC2040	VHiKiA7045A-1 or VHiKiA7045P-1	J	KA7045A	AE
IC2101	VHiBR24C16/-1 or VHiM24C16B/-1	J	I.C.	AL
IC3001	VHiCXA2074Q-1	J	CXA2074Q	AY

TRANSISTORS

You can substitute "VS2SC2462-C-1" for "VS2SD601AR/-1".

Ref. No.	Part No.	★	Description	Code
Q201	VS2SC2735//1E	J	2SC2735	AC
Q251	VS2SD601AR/-1	J	2SD601AR	AC
Q252	VS2SD601AR/-1	J	2SD601AR	AC
Q253	VS2SD601AR/-1	J	2SD601AR	AC
Q301	VS2SD601AR/-1	J	2SD601AR	AC
Q360	VS2SD601AR/-1	J	2SD601AR	AC
Q401	VS2SD601AR/-1	J	2SD601AR	AC
Q402	VS2SB709AR/-1	J	2SB709AR	AC
Q403	VS2SD601AR/-1	J	2SD601AR	AC
Q421	VS2SB709AR/-1	J	2SB709AR	AC
Q451	VS2SA1266-Y-1	J	2SA1266-Y	AA
Q601	VS2SC2482//-1	J	2SC2482	AD
⚠ Q602	VS2SC5150//2E	X	2SC5150 (36R-S50, 36R-S400)	AS
⚠ Q602	VS2SD2500//2E or VSBU2520AX/-1	J	2SD2500 (32R-S400, 32R-S50, CR32S40)	AT
Q672	VS2SA1266-Y-1	J	2SA1266-Y	AA
Q673	VS2SD2045//-1	J	2SD2045	AL
Q751	VS2SC3198-Y-1	J	2SC3198-Y	AA
Q901	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q902	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q903	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q904	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q921	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q922	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q923	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q924	VS2SD601AR/-1	J	2SD601AR (32R-S400, 36R-S400, CR32S40)	AC
Q1402	VS2SD601AR/-1	J	2SD601AR	AC
Q1403	VS2SD601AR/-1	J	2SD601AR	AC
Q1404	VS2SD601AR/-1	J	2SD601AR	AC
Q1405	VS2SD601AR/-1	J	2SD601AR	AC
Q1406	VS2SD601AR/-1	J	2SD601AR	AC
Q1601	VS2SD601AR/-1	J	2SD601AR	AC
Q1602	VS2SB709AR/-1	J	2SB709AR	AC
Q2060	VS2SD601AR/-1	J	2SD601AR	AC
Q2201	VS2SD601AR/-1	J	2SD601AR	AC
Q2211	VS2SD601AR/-1	J	2SD601AR	AC

DIODES

You can substitute "RH-DX0045GEZZ" for "VHD1SS119//-1".

Ref. No.	Part No.	★	Description	Code
D51	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
D53	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D103	VHD1SS119//-1	J	Diode	AB
D401	VHD1SS119//-1	J	Diode	AB
D402	RH-EX0723GEZZ	J	Zener Diode, 3.3V	AB
D403	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D404	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D405	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D454	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D455	VHD1SS119//-1	J	Diode	AB
D481	VHD1SS119//-1	J	Diode (32R-S400, 36R-S400, CR32S40)	AB
D482	VHD1SS119//-1	J	Diode (32R-S400, 36R-S400, CR32S40)	AB
⚠ D501	RH-DX0302CEZZ	J	Diode	AC
D510	RH-DX0441CEZZ	J	Diode	AC
D511	RH-EX0654CEZZ	J	Zener Diode, 75V	AD
⚠ D605	RH-DX0255CEZZ	J	Diode	AC
D621	RH-EX0631GEZZ	J	Zener Diode, 9.1V	AA
⚠ D622	RH-DX0131CEZZ	J	Diode	AC
▲⚠ D651	RH-DX0073CEZZ or RH-DX0131CEZZ or VHD1SS244	J	Diode	AD
▲⚠ D652	RH-EX0641GEZZ	J	Zener Diode, 12V	AA
▲⚠ D653	VHD1SS119//-1	J	Diode (32R-S50, 32R-S400, CR32S40)	AB
▲⚠ D654	VHD1SS119//-1	J	Diode (32R-S50, 32R-S400, CR32S40)	AB
D671	RH-EX0664GEZZ	J	Zener Diode, 24V	AA
D672	VHD1SS119//-1	J	Diode	AB
⚠ D673	RH-DX0229CEZZ	J	Diode	AF
D674	VHD1SS119//-1	J	Diode	AB
D705	VHD1SS82///1A	J	Diode	AC
D706	RH-DX0066GEZZ or RH-DX0131CEZZ	J	Diode	AB
D707	VHD1SS82///1A	J	Diode	AC
D708	RH-DX0066GEZZ or RH-DX0131CEZZ	J	Diode	AB
⚠ D709	RH-DX0229CEZZ	J	Diode	AF
⚠ D710	RH-EX0673GEZZ	J	Zener Diode, 30V	AB
⚠ D712	RH-DX0407CEZZ or RH-DX0468CEZZ or RH-DX0406CEZZ	J	Diode	AD
⚠ D713	RH-DX0259CEZZ or RH-DX0477CEZZ	J	Diode	AH

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
	or VHDRBV-606			
D715	RH-EX0610GEZZ	J	Zener Diode, 4.7V	AA
D716	VHD1SS119//-1	J	Diode	AB
D717	RH-EX0650GEZZ	J	Zener Diode, 16V	AB
⚠ D725	RH-DX0407CEZZ	J	Diode	AD
	or RH-DX0468CEZZ			
	or RH-DX0406CEZZ			
⚠ D751	RH-DX0441CEZZ	J	Diode	AC
⚠ D752	RH-DX0441CEZZ	J	Diode	AC
⚠ D753	RH-DX0441CEZZ	J	Diode	AC
⚠ D754	RH-DX0441CEZZ	J	Diode	AC
D755	VHD1SS119//-1	J	Diode	AB
D756	RH-DX0441CEZZ	J	Diode	AC
D2001	VHD1SS119//-1	J	Diode (32R-S50, 36R-S50)	AB
D2011	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
⚠ VA701	RH-VX0048CEZZ	J	Varistor	AE

PACKAGED CIRCUITS

⚠ PR701	RMPTP0072CEZZ	J	Packaged Circuit	AH
	or RMPTP0059CEZZ			
X801	RCRSB0001PEZZ	R	Crystal	AL
	or RCRSB0205CEZZ			

FILTERS

CF301	RFiLC0267CEZZ	J	Ceramic Filter	AD
CF302	RFiLC0029TAZZ	J	Ceramic Filter	AD
CF401	RFiLC0446CEZZ	J	Ceramic Filter	AD
	or RCiLC0013CEZZ			
CF631	RFiLA0034CEZZ	J	Ceramic Filter	AD
CF2040	RFiLA0099CEZZ	J	Ceramic Filter	AE
	or RFiLC0121GEZZ			
SF201	RFiLC0405CEZZ	J	SAW Filter	AH

COILS

L201	VP-XF1R2K0000	J	Peaking 1.2µH	AB
L202	RCiLi0588CEZZ	J	IF Coil	AF
L251	VP-XF390K0000	J	Peaking 39µH	AB
L301	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L302	RCiLi0613CEZZ	J	IF Coil	AE
	or RCiLi0605CEZZ			
L401	VP-XF6R8K0000	J	Peaking 6.8µH	AB
L402	VP-XF3R3K0000	J	Peaking 3.3µH	AB
L403	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L404	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L631	VP-XF150K0000	J	Peaking 15µH	AB
L671	RCiLZ1005CEZZ	J	Coil	AH
	or RCiLZ0868CEZZ			
L672	RCiLZ1027CEZZ	J	Coil	AE
	or RCiLZ0798CEZZ			
⚠ L701	RCiLF0313CEZZ	J	Coil	AH
	or RCiLF0273CEZZ			
⚠ L702	RCiLF0025PEZZ	R	Coil	AK
	or RFiLF0273PEZZ			
L705	RCiLP0179CEZZ	J	Coil	AD
L729	RCiLP0179CEZZ	J	Coil	AD
L1401	VP-XF100K0000	J	Peaking 10µH	AB
L1402	VP-XF100K0000	J	Peaking 10µH	AB
L1403	VP-XF150K0000	J	Peaking 15µH	AB
L1405	VP-XF330K0000	J	Peaking 33µH	AB
L2040	RCiLB0131CEZZ	J	Oscillation Coil	AE

TRANSFORMERS

⚠ T601	RTRNZ0057PEZZ	R	Transformer	AK
▲⚠ T602	RTRNF0035MEZZ	X	H-Volt Transformer (32R-S50, 32R-S400, CR32S40)	AY
	or RTRNF0039MEZZ			
▲⚠ T602	RTRNF0036MEZZ	X	H-Volt Transformer (36R-S50, 36R-S400)	AY
	or RTRNF0040MEZZ			
⚠ T701	RTRNP0543CEZZ	J	Power Transformer	AM
⚠ T702	RTRNW0003GJZZ	X	Transformer	AP
	or RTRNZ0018MEZZ			

32R-S50, 32R-S400, CR32S40

	T602	R654
COMBI-NATION	F0035ME	39K
	F0039ME	33K

36R-S50, 36R-S400

	T602	R652	R653	R654
COMBI-NATION	F0036ME	12K	10K	68K
	F0040ME	39K	33K	180K

CONTROLS

R502	RVR-M4334CEZZ	J	10k(B) V-Line.	AC
R676	RVR-M4334CEZZ	J	10k(B) H-Line.	AC
R678	RVR-M4336CEZZ	J	22k(B) H-Size	AC

CAPACITORS

[EL.…Electrolytic, M-Poly.…Metalized Polypro Film]

C51	VCEA0A1CW476M	J	47	16V	EL.	AB
C53	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C54	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C55	VCEA0A1CW108M	J	1000	16V	EL.	AD
C103	VCEA0A1CW228M	J	2200	16V	EL.	AD
C201	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C202	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C203	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C204	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C205	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C206	VCEA0A1CW337M	J	330	16V	EL.	AC
C207	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C208	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C209	VCKYCY1HB222K	J	2200p	50V	Ceramic	AA
C210	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C251	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C252	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C253	VCCCCY1HH470J	J	47p	50V	Ceramic	AA
C301	VCCCCY1HH330J	J	33p	50V	Ceramic	AA
C302	VCCCCY1HH151J	J	150p	50V	Ceramic	AA
C303	VCCCCY1HH390J	J	39p	50V	Ceramic	AA
C307	VCCCCY1HH1R5C	J	1.5p	50V	Ceramic	AD
C308	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C309	VCEA0A1CW337M	J	330	16V	EL.	AC
C312	VCEA0A1CW476M	J	47	16V	EL.	AB
C360	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C361	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C364	VCEA0A1EW107M	J	100	25V	EL.	AC
C365	VCEA0A0JW107M	J	100	6.3V	EL.	AB
C368	VCEA0A1CW477M	J	470	16V	EL.	AC
C369	VCEA0A1CW477M	J	470	16V	EL.	AC
C370	VCEA0A0JW107M	J	100	6.3V	EL.	AB
C371	VCQYTA1HM104K	J	0.1	50V	Mylar	AC
C372	VCQYTA1HM104K	J	0.1	50V	Mylar	AC
C380	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C381	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C401	VCKYCY1HB331K	J	330p	50V	Ceramic	AA
C402	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C403	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C404	VCEA0A1CW107M	J	100	16V	EL.	AC
C405	VCEA0A1CW106M	J	10	16V	EL.	AB

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
C406	VCEA0A1HW225M	J	2.2 50V EL.	AB
C408	VCEA0A1HW106M	J	10 50V EL.	AB
C409	VCEA0A1HW335M	J	3.3 50V EL.	AB
C410	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C411	VCEA0A1CW337M	J	330 16V EL.	AC
C412	VCKYCY1HB103K	J	0.01 50V Ceramic	AA
C413	VCKYCY1HB103K	J	0.01 50V Ceramic	AA
C414	VCKYCY1HB103K	J	0.01 50V Ceramic	AA
C422	VCEA0A1CW476M	J	47 16V EL.	AB
C451	VCQYTA1HM104K	J	0.1 50V Mylar	AC
C452	VCEA0A1HW475M	J	4.7 50V EL.	AB
C453	VCEA0A1CW226M	J	22 16V EL.	AB
C471	VCKYCY1HB103K	J	0.01 50V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C472	VCEA0A1HW106M	J	10 50V EL. (32R-S400, 36R-S400, CR32S40)	AB
C473	VCEA0A1CW106M	J	10 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C474	VCEA0A1CW106M	J	10 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C476	VCKYCY1HB103K	J	0.01 50V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C477	VCE9GA1CW106M	J	10 16V EL. (N.P) (32R-S400, 36R-S400, CR32S40)	AB
C478	VCKYCY1HB103K	J	0.01 50V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C501	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C502	VCEA0A1VW337M	J	330 35V EL.	AD
C509	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C510	VCFYSA1JB564J	J	0.56 63V Mylar	AE
C511	VCKYPA2HB391K	J	390p 500V Ceramic	AA
C512	VCQYTA1HM683J	J	0.068 50V Mylar	AB
C513	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C514	VCEA0A1VW107M	J	100 35V EL.	AC
C515	VCEACA1HC225J	J	2.2 50V EL.	AC
C516	VCEACA1HC105J	J	1.0 50V EL.	AB
C517	VCEA0A1VW108M	J	1000 35V EL.	AD
C518	VCFYSA1JB473J	J	0.047 63V Mylar	AC
C519	VCEA0A1HW105M	J	1.0 50V EL.	AB
C551	VCEACA1HC225J	J	2.2 50V EL.	AC
C552	VCEA0A1HW225M	J	2.2 50V EL.	AB
C553	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C605	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C606	VCKYPA2HB561K	J	560p 500V Ceramic	AA
C607	VCKYPA1HB472K	J	4700p 50V Ceramic	AA
C608	RC-KZ0033CEZZ	J	150p 2kV Ceramic (32R-S50, 32R-S400, CR32S40)	AB
C608	VCKYPH3DB271K	J	270p 2kV Ceramic (36R-S50, 36R-S400)	AC
▲⚠ C609	VCFPVC3CA822H	J	8200p 1.6kV M-Poly. (36R-S50, 36R-S400)	AE
▲⚠ C609	VCFPVC3CA912H	J	9100p 1.6kV M-Poly. (32R-S50, 32R-S400, CR32S40)	AE
▲⚠ C610	VCFPVC3CA912H	J	9100p 1.6kV M-Poly.	AE
C615	VCKYPA2HB272K	J	2700p 500V Ceramic	AA
C622	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C623	VCEA0A2CW336M	J	33 160V EL.	AE
C631	VCEA0A1HW335M	J	3.3 50V EL.	AB
C632	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C633	VCEA0A1CW107M	J	100 16V EL.	AC
C652	VCEA0A1VW476M	J	47 35V EL.	AB
⚠ C653	VCEA0A1HW106M	J	10 50V EL.	AB
C671	VCEA0A1EW336M	J	33 25V EL.	AB
C672	VCEACA1HC335J	J	3.3 50V EL.	AC
C673	VCEA0A1VW337M	J	330 35V EL.	AD
C674	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C675	VCEA0A1VW106M	J	10 35V EL.	AB
C676	VCE9GA1EW336M	J	33 25V EL. (N.P)	AB
C677	RC-FZ0374CEZZ or RC-FZ0184CEZZ	J	47 50V Mylar	AF
▲⚠ C678	VCQPPC2GB473J	J	0.047 400V M-Poly. (32R-S50, 32R-S400, CS32S40)	AB
▲⚠ C678	VCQPPC2JB473J	J	0.047 630V M-Poly. (36R-S50, 36R-S400)	AC
C680	VCFPVC2DB684J	X	0.68 200V M-Poly.	AG
C682	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
⚠ C701	RC-FZ037SCEZZ or RC-FZ017SCEZZ or RC-FZ029SCEZZ or RC-FZ012SGEZZ or RC-FZ004SCEZZ	J	0.22 AC125V Plastic	AD
C702	RC-KZ0029CEZZ	J	0.01 500V Ceramic	AC
C703	RC-KZ0029CEZZ	J	0.01 500V Ceramic	AC
⚠ C705	RC-EZ0720CEZZ or RC-EZ0801CEZZ	J	680 200V EL. (32R-S50, 32R-S400, CR32S40)	AN
⚠ C705	RC-EZ0722CEZZ or RC-EZ0802CEZZ	X	820 200V EL. (36R-S50, 36R-S400)	AN
⚠ C706	RC-KZ0092GEZZ or RC-KZ0311CEZZ	J	0.033 AC250V Ceramic	AC
C707	VCFPVC3CA222H	J	2200p 1.6kV M-Poly.	AE
C708	VCCSPA1HL471J	J	470p 50V Ceramic	AA
C709	VCEA0A1VW107M	J	100 35V EL.	AC
C710	VCQYTA1HM821J+	X	820p 50V Mylar	AE
C717	VCKYPA2HB472K	J	4700p 500V Ceramic	AB
C722	VCQYTA1HM104K	J	0.1 50V Mylar	AC
⚠ C723	RC-EZ0724CEZZ	J	100 160V EL.	AG
⚠ C725	RC-EZ0810CEZZ or RC-EZ1171CEZZ	X	330 160V EL.	AL
C726	VCKYPH3DB561K	J	560p 2kV Ceramic	AC
C727	VCKYPH3DB561K	J	560p 2kV Ceramic	AC
C729	VCEA0A1CW106M	J	10 16V EL.	AB
C730	VCEA4A1EN108M	J	1000 25V EL.	AD
C731	RC-EZ0385CEZZ	J	1000 16V EL.	AE
C732	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C741	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C742	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C751	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C753	VCEA0A1CW107M	J	100 16V EL.	AC
C755	VCEA0A1CW476M	J	47 16V EL.	AB
⚠ C772	VCEA0A1VW477M	J	470 35V EL.	AB
C773	VCCSPA1HL101J	J	100p 50V Ceramic	AA
C801	VCQYTA1HM223K	J	0.022 50V Mylar	AB
C802	VCEA0A1HW474M	J	0.47 50V EL.	AB
C803	VCCCCY1HH110J	J	11p 50V Ceramic	AA
C804	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C805	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C806	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C807	VCCCCY1HH221J	J	220p 50V Ceramic	AA
C901	VCEA0A1HW335M	J	3.3 50V EL. (32R-S400, 36R-S400, CR32S40)	AB
C903	VCEA0A1HW335M	J	3.3 50V EL. (32R-S400, 36R-S400, CR32S40)	AB
C922	VCEA0A1HW335M	J	3.3 50V EL. (32R-S400, 36R-S400, CR32S40)	AB
C923	VCEA0A1HW335M	J	3.3 50V EL. (32R-S400, 36R-S400, CR32S40)	AB
C925	VCEA0A1CW476M	J	47 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C926	VCEA0A1CW476M	J	47 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C927	VCKYCY1HB103K	J	0.01 50V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C928	VCKYCY1HB103K	J	0.01 50V Ceramic (32R-S400, 36R-S400, CR32S40)	AA

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
C929	VCEA0A1CW106M	J	10 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C930	VCEA0A1CW106M	J	10 16V EL. (32R-S400, 36R-S400, CR32S40)	AB
C931	VCKYCY1EB183K	J	0.018 25V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C932	VCKYCY1EB183K	J	0.018 25V Ceramic (32R-S400, 36R-S400, CR32S40)	AA
C951	VCEA0A1CW106M	J	10 16V EL.	AB
C952	VCEA0A1CW106M	J	10 16V EL.	AB
C954	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C955	VCEA0A1CW106M	J	10 16V EL.	AB
C956	VCEA0A1CW337M	J	330 16V EL. (32R-S400, 36R-S400, CR32S40)	AC
C1401	VCCCCY1HH220J	J	22p 50V Ceramic	AA
C1402	VCFYFA1HA474J	J	0.47 50V Mylar	AC
C1403	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1404	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1405	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1407	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1408	VCEA0A1HW106M	J	10 50V EL.	AB
C1409	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1410	VCCCCY1HH181J	J	180p 50V Ceramic	AA
C1411	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1412	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1413	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1415	VCEA0A1CW476M	J	47 16V EL.	AB
C1416	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C1417	VCCCCY1HH390J	J	39p 50V Ceramic	AA
C1419	VCEA0A1HW106M	J	10 50V EL.	AB
C1420	VCKYCY1HB103K	J	0.01 50V Ceramic	AA
C1421	VCCCCY1HH120J	J	12p 50V Ceramic	AA
C1423	VCCCCY1HH120J	J	12p 50V Ceramic	AA
C1424	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C1425	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C1428	VCCCCY1HH270J	J	27p 50V Ceramic	AA
C1601	VCEA0A1CW106M	J	10 16V EL.	AB
C1602	VCCCCY1HH470J	J	47p 50V Ceramic	AA
C1603	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2001	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2002	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2040	VCEA0A1AW107M	J	100 10V EL.	AB
C2041	VCEA0A1HW105M	J	1.0 50V EL.	AB
C2060	VCKYCY1CB104K	J	0.1 16V Ceramic	AB
C2061	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2062	VCEA0A1AW107M	J	100 10V EL.	AB
C2063	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2201	VCKYCY1HB681K	J	680p 50V Ceramic	AA
C2202	VCCCCY1HH390J	J	39p 50V Ceramic	AA
C3001	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB
C3002	VCKYCY1HB562K	J	5600p 50V Ceramic	AA
C3003	VCQYTA1HM123K	J	0.012 50V Mylar	AA
C3004	VCEA0A1HW105M	J	1.0 50V EL.	AB
C3005	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3006	VCEA0A1HW106M	J	10 50V EL.	AB
C3007	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3008	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C3009	VCEA0A1CW227M	J	220 16V EL.	AC
C3010	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB
C3011	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3012	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB
C3013	VCKYCY1HB272K	J	2700p 50V Ceramic	AA
C3014	VCQYTA1HM473K	J	0.047 50V Mylar	AB
C3015	VCEACA1EC335J+	X	3.3 25V EL.	AF
C3016	VCE9GA1HW475M	J	4.7 50V EL. (N.P)	AB
C3017	VCEACA1CC106J+	X	10 16V EL.	AF
C3018	VCEA0A1HW105M	J	1.0 50V EL.	AB
C3021	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3022	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3031	VCEA0A1HW475M	J	4.7 50V EL.	AB
C3032	VCEA0A1HW475M	J	4.7 50V EL.	AB

RESISTORS

[M-Ox.··· Metal Oxide, M-Film··· Metal Film]

Ref. No.	Part No.	★	Description	Code
RJ2	VRS-CY1JF000J	J	0 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
RJ3	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ7	VRS-CY1JF000J	J	0 1/16W M-Ox. (32R-S50)	AA
RJ10	VRS-CY1JF000J	J	0 1/16W M-Ox. (32R-S50, 36R-S50)	AA
RJ19	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ20	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ21	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ22	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ23	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ24	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ25	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ27	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ28	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ29	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ30	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ31	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ32	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ33	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ35	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ36	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ37	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ38	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ39	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ42	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
RJ43	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R51	VRS-RG3AB151J+	X	150 1W M-Ox.	AE
R53	VRS-RG3DB470J+	X	47 2W M-Ox.	AE
R54	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R55	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R56	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
R57	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
R201	VRS-CY1JF151J	J	150 1/16W M-Ox.	AA
R202	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R203	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R204	VRS-CY1JF270J	J	27 1/16W M-Ox.	AA
R205	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA
R206	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R207	VRD-RA2BE4R7J	J	4.7 1/8W Carbon	AA
R208	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R209	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R251	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R252	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R253	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R254	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R255	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
R256	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R257	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R258	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R259	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R301	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R302	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R303	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R304	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R305	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R306	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R360	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R361	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R362	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R363	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R364	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R365	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R370	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R371	VRD-RA2EE3R3J	J	3.3 1/4W Carbon	AA
R372	VRD-RA2EE3R3J	J	3.3 1/4W Carbon	AA
R401	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R402	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R403	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R404	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R405	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R406	VRS-CY1JF680J	J	68 1/16W M-Ox.	AA
R407	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R408	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R409	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R410	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R411	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R412	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R413	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R414	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R415	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R420	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R421	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R424	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R426	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R427	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R428	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R431	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
R432	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
R433	VRS-CY1JF330J	J	33 1/16W M-Ox.	AA
R434	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
⚠ R451	VRS-RG3AB103J	J	10k 1W M-Ox.	AB
R452	VRD-RM2HD683J	J	68k 1/2W Carbon	AA
R453	VRD-RA2EE682J	J	6.8k 1/4W Carbon (32R-S50, 32R-S400, CR32S40)	AA
R454	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R456	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R458	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R471	VRS-CY1JF101J	J	100 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R472	VRS-CY1JF101J	J	100 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R473	VRD-RA2BE102J	J	1.0k 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R474	VRS-CY1JF101J	J	100 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R475	VRD-RA2BE102J	J	1.0k 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R481	VRS-CY1JF682J	J	6.8k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R482	VRS-CY1JF103J	J	10k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
⚠ R501	VRN-RL3LB2R2J+	X	2.2 3W M-Film	AF
R506	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R510	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R511	VRD-RA2BE393J	J	39k 1/8W Carbon (32R-S50, 32R-S400, CR32S40)	AA
R511	VRD-RA2BE473J	J	47k 1/8W Carbon (36R-S50, 36R-S400)	AA
R512	VRD-RA2BE683J	J	68k 1/8W Carbon	AA
R513	VRS-CY1JF273J	J	27k 1/16W M-Ox. (32R-S50, 32R-S400, CR32S40)	AA
R513	VRS-CY1JF563J	J	56k 1/16W M-Ox. (36R-S50, 36R-S400)	AA
R514	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R519	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
R520	VRS-CY1JF184J	J	180k 1/16W M-Ox.	AA
R521	VRD-RM2HD152J	J	1.5k 1/2W Carbon	AA
R522	VRS-RG3AB102J+	X	1.0k 1W M-Ox.	AE
R523	VRN-RL3AB1R0J+	X	1.0 1W M-Film (36R-S50, 36R-S400)	AE
R523	VRN-RL3AB1R2J	X	1.2 1W M-Film (32R-S50, 32R-S400, CR32S40)	AE
R524	VRS-RG3AB391J+	X	390 1W M-Ox.	AE
R525	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
R551	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R552	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R553	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
R554	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA
⚠ R604	VRS-RG3LB222J+	X	2.2k 3W M-Ox. (32R-S50, 32R-S400, CR32S40)	AF
⚠ R604	VRS-RG3LB332J+	X	3.3k 3W M-Ox. (36R-S50, 36R-S400)	AF
R605	VRD-RM2HD331J	J	330 1/2W Carbon	AA
R606	VRD-RM2HD271J	J	270 1/2W Carbon	AA
⚠ R607	VRS-RG3LB222J+	X	2.2k 3W M-Ox. (32R-S50, 32R-S400, CR32S40)	AF
⚠ R607	VRS-RG3LB332J+	X	3.3k 3W M-Ox. (36R-S50, 36R-S400)	AF
R609	VRS-RG3AB562J+	X	5.6k 1W M-Ox.	AE
R610	VRD-RM2HD220J	J	22 1/2W Carbon	AA
⚠ R611	VRW-KQ41C3R3K	J	3.3 15W Cement	AG
⚠ R621	VRN-VV3LB1R2J	J	1.2 3W M-Film (32R-S50, 32R-S400, CR32S40)	AC
⚠ R621	VRN-VV3LB2R7J	J	2.7 3W M-Film (36R-S50, 36R-S400)	AB
⚠ R622	VRN-RL2HCR56J+	X	0.56 1/2W M-Film (36R-S50, 36R-S400)	AE
⚠ R622	VRN-RL2HCR68J+	X	0.68 1/2W M-Film (32R-S50, 32R-S400, CR32S40)	AE
⚠ R623	VRN-RL3AB1R0J+	X	1.0 1W M-Film	AE
⚠ R624	VRS-RG3DB332J+	X	3.3k 2W M-Ox.	AE
R625	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R631	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R632	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R633	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
▲⚠ R651	VRN-RL2HC1R0J+	X	1.0 1/2W M-Film	AE
▲⚠ R652	VRD-RA2EE103J	J	10k 1/4W Carbon (32R-S50, 32R-S400, CR32S40)	AA
▲⚠ R652	VRD-RA2EE393J	J	39k 1/4W Carbon (36R-S50, 36R-S400)	AA
▲⚠ R653	VRD-RA2EE333J	J	33k 1/4W Carbon (36R-S50, 36R-S400)	AA
▲⚠ R653	VRD-RA2EE562J	J	5.6k 1/4W Carbon (32R-S50, 32R-S400, CR32S40)	AA
▲⚠ R654	VRD-RA2EE184J	J	180k 1/4W Carbon (36R-S50, 36R-S400)	AA
▲⚠ R654	VRD-RA2EE393J	J	39k 1/4W Carbon (32R-S50, 32R-S400, CR32S40)	AA
▲⚠ R655	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
⚠ R658	VRS-RG3DB123J	J	12k 2W M-Ox. (32R-S50, 32R-S400, CR32S40)	AA
⚠ R658	VRS-RG3DB153J	J	15k 2W M-Ox. (36R-S50, 36R-S400)	AA
R671	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R672	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R673	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R674	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R675	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R677	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R679	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R680	VRS-CY1JF822J	J	8.2k 1/16W M-Ox.	AA
R681	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
R682	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R683	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R684	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R685	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R686	VRD-RA2EE222J	J	2.2k 1/4W Carbon	AA
R687	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
⚠ R688	VRN-RL3DB3R3J+	X	3.3 2W M-Film	AE
R689	VRS-CY1JF274J	J	270k 1/16W M-Ox.	AA
⚠ R690	VRS-RG3LB561J+	X	560 3W M-Ox.	AF
⚠ R691	VRG-RL2HB101J	J	100 1/2W Carbon	AB
⚠ R701	RR-DZ0049CEZZ or RR-HZ0048CEZZ	J	3.9M 1/2W Solid	AB
⚠ R702	VRW-KQ4AC1R2K	J	1.2 10W Cement	AE
⚠ R703	VRS-RG3LB101J	J	100 3W M-Ox.	AC
R704	VRD-RM2HD154J	J	150k 1/2W Carbon	AA
⚠ R705	VRN-RL3DBR22J	J	0.22 2W M-Film	AA

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
⚠ R706	VRN-RL3DBR22J	J	0.22 2W M-Film (36R-S50, 36R-S400)	AA
⚠ R706	VRN-RL3DBR27J+	X	0.27 2W M-Film (32R-S50, 32R-S400, CR32S40)	AE
R707	VRS-RG2HC681J	J	680 1/2W M-Ox.	AA
R709	VRN-GA2EB1R0J	J	1.0 1/4W M-Film	AA
R710	VRD-RM2HD330J	J	33 1/2W Carbon (32R-S50, 32R-S400, CR32S40)	AA
R710	VRD-RM2HD470J	J	47 1/2W Carbon (36R-S50, 36R-S400)	AA
R711	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
⚠ R715	VRS-RG3DB153J	J	15k 2W M-Ox.	AA
⚠ R723	VRN-RL3DBR39J+	X	0.39 2W M-Film	AE
R724	VRS-RG2HC332J	J	3.3k 1/2W M-Ox.	AA
⚠ R725	VRS-RG3AB182J	J	1.8k 1W M-Ox.	AA
R726	VRD-RM2HD102J	J	1.0k 1/2W Carbon (36R-S50, 36R-S400)	AA
⚠ R727	VRN-RL3LB2R7J+	X	2.7 3W M-Film	AF
R734	VRD-RM2HD124J	J	120k 1/2W Carbon	AA
⚠ R737	VRN-RL3DBR56J+	X	0.56 2W M-Film	AE
R751	VRS-CY1JF473J	J	47k 1/16W M-Ox.	AA
R755	VRS-RG3LB220J+	X	22 3W M-Ox.	AF
R801	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R802	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R803	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R804	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R805	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R806	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R901	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R902	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R903	VRD-RA2BE102J	J	1.0k 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R904	VRS-CY1JF683J	J	68k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R905	VRS-CY1JF223J	J	22k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R906	VRS-CY1JF392J	J	3.9k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R907	VRS-CY1JF182J	J	1.8k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R908	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R910	VRD-RA2BE102J	J	1.0k 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R911	VRS-CY1JF683J	J	68k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R912	VRS-CY1JF223J	J	22k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R913	VRS-CY1JF392J	J	3.9k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R914	VRS-CY1JF182J	J	1.8k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R915	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R922	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R923	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R924	VRS-CY1JF750J	J	75 1/16W M-Ox.	AA
R925	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R926	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R927	VRD-RA2EE750J	J	75 1/4W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R928	VRD-RA2EE750J	J	75 1/4W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R929	VRS-CY1JF101J	J	100 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R930	VRS-CY1JF563J	J	56k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R931	VRS-CY1JF333J	J	33k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R932	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R933	VRS-CY1JF122J	J	1.2k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R934	VRS-CY1JF473J	J	47k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R935	VRS-CY1JF101J	J	100 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R936	VRS-CY1JF473J	J	47k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R937	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R938	VRS-CY1JF122J	J	1.2k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R939	VRS-CY1JF122J	J	1.2k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R940	VRS-CY1JF122J	J	1.2k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R941	VRS-CY1JF183J	J	18k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R942	VRS-CY1JF273J	J	27k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R943	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R951	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R952	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R955	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R958	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R959	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R961	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R962	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R963	VRD-RA2BE331J	J	330 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R1404	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R1405	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
R1406	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R1408	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA
R1409	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1410	VRS-CY1JF681J	J	680 1/16W M-Ox.	AA
R1411	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1412	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA
R1413	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R1414	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R1415	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA
R1416	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R1417	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R1418	VRS-CY1JF153J	J	15k 1/16W M-Ox.	AA
R1419	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1420	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R1423	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R1601	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1602	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R1603	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R1604	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R1605	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R1606	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R1607	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R1608	VRS-CY1JF681J	J	680 1/16W M-Ox.	AA
R1609	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R2001	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2002	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2004	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R2006	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2007	VRD-RA2BE223J	J	22k 1/8W Carbon (32R-S50, 36R-S50)	AA
R2008	VRD-RA2BE102J	J	1.0k 1/8W Carbon (32R-S400, 36R-S400, CR32S40)	AA
R2008	VRD-RA2BE224J	J	220k 1/8W Carbon (32R-S50, 36R-S50)	AA
R2009	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2010	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA

PWB-A: DUNTKA118WEV5 (32R-S50)
PWB-A: DUNTKA118WEV7 (32R-S400, CR32S40)
PWB-A: DUNTKA118WEV8 (36R-S50)
PWB-A: DUNTKA118WEW0 (36R-S400)
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R2012	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R2020	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R2023	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2024	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2025	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2026	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2027	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2028	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2031	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2032	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2033	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2040	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2041	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R2042	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2043	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R2044	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R2045	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2046	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R2047	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2048	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R2060	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2061	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R2062	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA
R2063	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R2064	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R2068	VRS-CY1JF103J	J	10k 1/16W M-Ox. (32R-S50, 36R-S50)	AA
R2069	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R2070	VRS-CY1JF103J	J	10k 1/16W M-Ox. (32R-S50, 36R-S50)	AA
R2071	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2072	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2073	VRS-CY1JF102J	J	1.0k 1/16W M-Ox. (32R-S400, 36R-S400, CR32S40)	AA
R2101	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2102	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2201	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2202	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2203	VRD-RA2BE184J	J	180k 1/8W Carbon	AA
R2211	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2212	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R2213	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R2401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2402	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2404	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2507	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
R3001	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R3002	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R3003	VRS-CY1JF105J	J	1.0M 1/16W M-Ox.	AA
R3004	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R3005	VRS-CY1JF623J	J	62k 1/16W M-Ox.	AA
R3007	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R3008	VRS-CY1JF302J	J	3.0k 1/16W M-Ox.	AA
R3010	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
R3011	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R3012	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R3017	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R3018	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA

SWITCH

S502	QSW-B0015CEZZ	J	Vertical Center	AC

MISCELLANEOUS PARTS

⚠ RY701	RRLYJ0081CEZZ or RRLYJ0094CEZZ	J	Relay	AL
⚠ F701	QFS-B5023CEZZ	J	Fuse, 5A/125V	AC
FB601	RBLN-0047CEZZ	J	Ferrite Bead	AB
FB671	RBLN-0047CEZZ	J	Ferrite Bead	AB
FB701	RBLN-0091GEZZ or RBLN-0037CEZZ	X	Ferrite Bead	AC
FB702	RBLN-0090GEZZ∗ or RBLN-0036CEZZ	X	Ferrite Bead	AE
FB704	RBLN-0091GEZZ or RBLN-0037CEZZ	X	Ferrite Bead	AC
FB706	RBLN-0091GEZZ	X	Ferrite Bead	AC
FH701	QFSHD1013CEZZ	J	Fuse Holder	AC
FH702	QFSHD1014CEZZ	J	Fuse Holder	AC
J921	QSOCD0430CEZZ	J	Socket, S-Video (32R-S400, 36R-S400, CR32S40)	AE
P351	QPLGN0461CEZZ	J	Plug, 4-pin(S)	AB
P401	QPLGN0561CEZZ	J	Plug, 5-pin(GBN)	AB
P601	QPLGN0161FJZZ	J	Plug, 5-pin(K)	AE
P621	QPLGN0461CEZZ	J	Plug, 4-pin(YBN)	AB
P651	QPLGN0361CEZZ	J	Plug, 3-pin(P651-3)	AB
P701	QPLGN0460CEZZ or QPLGN0404CEZZ	J	Plug, 4-pin(M)	AC
P703	QPLGN0269GEZZ	J	Plug, 2-pin(P)	AB
P901	QPLGN0661CEZZ	J	Plug, 6-pin(EJ)	AD
P2002	QPLGN0461CEZZ	J	Plug, 4-pin(YR)	AB
P2401	QPLGN0561CEZZ	J	Plug, 5-pin	AB
RDA361	PRDAR5006MEFW	X	Heat Sink, for IC361	AE
RDA501	PRDAR0234PEFW	R	Heat Sink, for IC501	AH
RDA601	PRDAR0150PEFW	R	Heat Sink, for Q602	AL
RDA671	PRDAR1007MEFW	J	Heat Sink, for Q673	AH
RDA701	PRDAR1006MEFW	J	Heat Sink, for IC701	AH
RDA750	PRDAR5072CEFW	J	Heat Sink, for IC751	AC
TAN921	QTANJ0323CEZZ	J	AV Terminal (32R-S50, 36R-S50)	AL
TAN921	QTANJ0523CEZZ	X	AV Terminal (32R-S400, 36R-S400, CR32S40)	AL
	LX-BZ3049GEFD	J	Screw	AA
	LX-HZ3007MEFD	X	Screw	AF

Ref. No.	Part No.	★	Description	Code

PWB-B: DUNTK9303WEV0(32R-S50/S400, CR32S40)
PWB-B: DUNTK9303WEV1(36R-S50/S400)
CRT UNIT

TRANSISTORS

Q850	VS2SC4544LB2E	J	C4544LB	AD
Q851	VS2SC4544LB2E	J	C4544LB	AD
Q852	VS2SC4544LB2E	J	C4544LB	AD
Q853	VS2SC3198-Y-1	J	C3198-Y	AA
Q854	VS2SC3198-Y-1	J	C3198-Y	AA
Q855	VS2SC3198-Y-1	J	C3198-Y	AA
Q894	VS2SA1266-Y-1	J	A1266-Y	AA

DIODES

D850	VHD1SS119//-1	J	Diode	AB
D851	VHD1SS119//-1	J	Diode	AB
D852	VHD1SS119//-1	J	Diode	AB
D894	VHD1SS119//-1	J	Diode	AB
D895	VHD1SS119//-1	J	Diode	AB
D896	RH-EX0616GEZZ or RH-EX0298CEZZ	J	Zener Diode, 5.6V	AA
D897	VHD1SS119//-1	J	Diode	AB
D898	VHD1SS119//-1	J	Diode	AB

COILS

L852	VP-MK221K0000	J	Peaking 220µH	AB
L853	VP-MK221K0000	J	Peaking 220µH	AB
L854	VP-MK221K0000	J	Peaking 220µH	AB

CAPACITORS

[EL.··· Electrolytic]

C850	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C851	VCEA0A1CW476M	J	47	16V	EL.	AB
C876	VCCSPA1HL561J	J	560p	50V	Ceramic	AA
C877	VCCSPA1HL471J	J	470p	50V	Ceramic	AA
C878	VCCSPA1HL561J	J	560p	50V	Ceramic	AA
C880	RC-KZ018JCEZZ	J	0.01	3kV	Ceramic	AC
C892	VCEA0A1CW106M	J	10	16V	EL.	AB
C893	VCEA0A1CW106M	J	10	16V	EL.	AB
C895	VCEA0A1CW226M	J	22	16V	EL.	AB

RESISTORS

[M-Ox.··· Metal Oxide]

R842	VRD-RM2HD104J	J	100k	1/2W	Carbon	AA
			(36R-S50/S400)			
R849	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R850	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R851	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R852	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R854	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R855	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R856	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R857	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R858	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
⚠ R859	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
⚠ R860	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
⚠ R861	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
⚠ R862	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
⚠ R863	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
⚠ R864	VRS-VV3DB273J	J	27k	2W	M-Ox.	AA
R868	VRD-RM2HD224J	J	220k	1/2W	Carbon	AA
R870	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R871	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R872	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R873	VRD-RA2BE220J	J	22	1/8W	Carbon	AA
R874	VRD-RA2BE220J	J	22	1/8W	Carbon	AA
R875	VRD-RA2BE220J	J	22	1/8W	Carbon	AA
R876	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R877	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R878	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R880	VRC-MA2HG332K	J	3.3k	1/2W	Solid	AA
R881	VRC-MA2HG332K	J	3.3k	1/2W	Solid	AA
R882	VRC-MA2HG332K	J	3.3k	1/2W	Solid	AA
R883	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R884	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R885	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R886	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R887	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R888	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R891	VRD-RA2BE561G	J	560	1/8W	Carbon	AE
R892	VRD-RA2BE331G	J	330	1/8W	Carbon	AE
R894	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R895	VRD-RA2EE561J	J	560	1/4W	Carbon	AA

MISCELLANEOUS PARTS

P860	QPLGN0461CEZZ	J	Plug, 4-pin(YBN)	AB
P880	QPLGN0561CEZZ	J	Plug, 5-pin(GBN)	AB
SC801	QSOCV0937CEZZ	J	CRT Socket (32R-S50/S400, CR32S40)	AL
SC802	QSOCV1011CEZZ	J	CRT Socket (36R-S50/S400)	AF

Ref. No.	Part No.	★	Description	Code

PWB-F: DUNTK9514WEV4
CONTROL UNIT

CAPACITORS
[EL.···Electrolytic]

C4001	VCEA0A1HW475M	J	4.7	50V	EL.	AB

RESISTORS

R4001	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R4003	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R4004	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R4005	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R4006	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R4007	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R4008	VRD-RA2BE750J	J	75	1/8W	Carbon	AA
R4009	VRD-RA2BE153J	J	15k	1/8W	Carbon	AA
R4010	VRD-RA2BE272J	J	2.7k	1/8W	Carbon	AA

SWITCHES

S4001	QSW-K0202PEZZ	R	Power	AC
S4002	QSW-K0202PEZZ	R	CH-Up	AC
S4003	QSW-K0202PEZZ	R	CH-Down	AC
S4004	QSW-K0202PEZZ	R	VOL-Up	AC
S4005	QSW-K0202PEZZ	R	VOL-Down	AC

MISCELLANEOUS PARTS

J4001	QJAKE0179CEZZ	X	Jack, Audio-In(L)	AP
J4002	QJAKE0180CEZZ	J	Jack, Audio-In(R)	AE
J4003	QJAKE0181CEZZ	X	Jack, Video-In	AP
P4001	QPLGN0461CEZZ	J	Plug, 4-pin(YR)	AB
P4003	QPLGN0661CEZZ	J	Plug, 6-pin(EJ)	AD
RMC4001	RRMCU0230CEZZ	X	R/C Receiver	AK
	or			
	RRMCU0231CEZZ			
	QCNW-0176MEZZ	X	Connecting Cord	AH
	QCNW-0179MEZZ	X	Connecting Cord	AM

Ref. No.	Part No.	★	Description	Code

PWB-R: DUNTK9511WEV8
(32R-S400, 36R-S400, CR32S40)
P-IN-P UNIT

INTEGRATED CIRCUITS

IC1701	VHiMM1117XF1E∗	X	MM1117XFBE	AH
IC1781	VHiKA7805AP-1	J	KA7805API	AE
IC1801	VHiM65667FP-2	J	M65667FP	BC

TRANSISTORS
You can substitute "VS2SC2412-C-1" or "VS2SC2462-C-1" for "VS2SD601AR/-1".

Q1721	VS2SD601AR/-1	J	2SD601AR	AC
Q1741	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1742	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1761	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1762	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1791	VS2SC1959Y/1E	J	2SC1959Y	AC
Q1861	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1881	VS2SD601AR/-1	J	2SD601AR	AC
Q1882	VS2SD601AR/-1	J	2SD601AR	AC
Q1883	VS2SD601AR/-1	J	2SD601AR	AC

DIODES
You can substitute "RH-DX0475CEZZ" for "VHD1SS119//-1".

D1791	RH-EX0604GEZZ	J	Zener Diode, 4.3V	AB
D1801	VHD1SS119//-1	J	Diode	AB
D1821	VHD1SS119//-1	J	Diode	AB

CRYSTAL

X1861	RCRSB0283CEZZ	J	Crystal	AG
	or			
	RCRSB0241CEZZ			

COILS

L1721	VP-XF680K0000	J	Peaking 68µH	AB
L1801	VP-XF100K0000	J	Peaking 10µH	AB
L1821	VP-XF100K0000	J	Peaking 10µH	AB
L1861	VP-XF100K0000	J	Peaking 10µH	AB
L1862	VP-XF100K0000	J	Peaking 10µH	AB
L1863	VP-XF100K0000	J	Peaking 10µH	AB

CAPACITORS
[EL.···Electrolytic]

C1701	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C1702	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C1703	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C1721	VCEA0A1HW106M	J	10	50V	EL.	AB
C1722	VCCCCY1HH330J	J	33p	50V	Ceramic	AA
C1741	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1742	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C1743	VCQYTA1HM472J	J	4700p	50V	Mylar	AB
C1761	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1762	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C1763	VCQYTA1HM682J	J	6800p	50V	Mylar	AB
C1781	VCEA0A1CW476M	J	47	16V	EL.	AB
C1791	VCEA0A1AW107M	J	100	10V	EL.	AB
C1792	VCEA0A1AW107M	J	100	10V	EL.	AB
C1801	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1802	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1803	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1804	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1805	VCEA0A1HW106M	J	10	50V	EL.	AB
C1806	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB

PWB-R: DUNTK9511WEV8 (32R-S400, 36R-S400, CR32S40)

P-IN-P UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C1807	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1809	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1810	VCEA0A1CW226M	J	22	16V	EL.	AB
C1811	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1812	VCEA0A1HW106M	J	10	50V	EL.	AB
C1821	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1822	VCEA0A1HW106M	J	10	50V	EL.	AB
C1841	VCEA0A1HW106M	J	10	50V	EL.	AB
C1842	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1843	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C1845	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1846	VCCCCY1HH151J	J	150p	50V	Ceramic	AA
C1847	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1848	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1849	VCEA0A1HW106M	J	10	50V	EL.	AB
C1850	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1851	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1861	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1862	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1863	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C1865	VCFYFA1HA154J	J	0.15	50V	Mylar	AC
C1866	VCQYTA1HM103J	J	0.01	50V	Mylar	AA
C1867	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1868	VCFYFA1HA474J	J	0.47	50V	Mylar	AC
C1869	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1870	VCEA0A1HW106M	J	10	50V	EL.	AB
C1871	VCEA0A1HW106M	J	10	50V	EL.	AB
C1872	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA

RESISTORS

[M-Ox.···Metal Oxide]

RJ1	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ2	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ3	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ4	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ5	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ6	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ7	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ8	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ9	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ10	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ11	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R1701	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1702	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1703	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1704	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1705	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1706	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1721	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R1722	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R1723	VRS-CY1JF822J	J	8.2k	1/16W	M-Ox.	AA
R1724	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R1741	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R1742	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1743	VRS-CY1JF151J	J	150	1/16W	M-Ox.	AA
R1744	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1745	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1746	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1747	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R1761	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1762	VRS-CY1JF151J	J	150	1/16W	M-Ox.	AA
R1763	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1764	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1765	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1766	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1791	VRD-RA2BE151J	J	150	1/8W	Carbon	AA
R1801	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1821	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1822	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R1823	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R1825	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R1828	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1831	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R1832	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R1833	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R1834	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R1841	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1842	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R1843	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R1861	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1862	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1863	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1864	VRS-CY1JF221J	J	220	1/16W	M-Ox.	AA
R1865	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1866	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R1867	VRS-CY1JF202J	J	2.0k	1/16W	M-Ox.	AA
R1868	VRS-CY1JF510J	J	51	1/16W	M-Ox.	AA
R1881	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1882	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R1883	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1884	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1885	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1886	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R1887	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1889	VRD-RA2BE101J	J	100	1/8W	Carbon	AB

MISCELLANEOUS PARTS

P1701	QPLGZ0810CEZZ	J	Plug, 8-pin	AD
P1702	QPLGZ0610CEZZ	J	Plug, 6-pin	AB
P1703	QPLGZ0810CEZZ	J	Plug, 8-pin	AD
SLD1801	PSLDM0012MEFW	J	Shield	AD

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ ACC701	QACCD3065CESA	J	AC Cord	AN
SP1	VSP1206PB396E	X	Speaker, 6 ohm (L)	AQ
SP2	VSP1206PB396E	X	Speaker, 6 ohm (R)	AQ
	QCNW-0143MEZZ	X	Connecting Cord	AK
	QCNW-0144MEZZ	X	Connecting Cord	AG
	QCNW-0178MEZZ	X	Connecting Cord (32R-S50/S400, CR32S40)	AG
	QCNW-0145MEZZ	X	Connecting Cord (36R-S50/S400)	AE
	TCAUH3044GJZZ	X	Caution Card (32R-S50/S400)	AD
	TCAUH3048GJZZ	X	Caution Card (36R-S50/S400)	AD
	TCAUS3001GJZZ	X	Caution Card (CR32S40)	
	TCAUS3002GJZZ	X	Caution Card (CR32S40)	
	TLABZ0154GJZZ	X	Carton Label (CR32S40)	AF

SUPPLIED ACCESORRIES

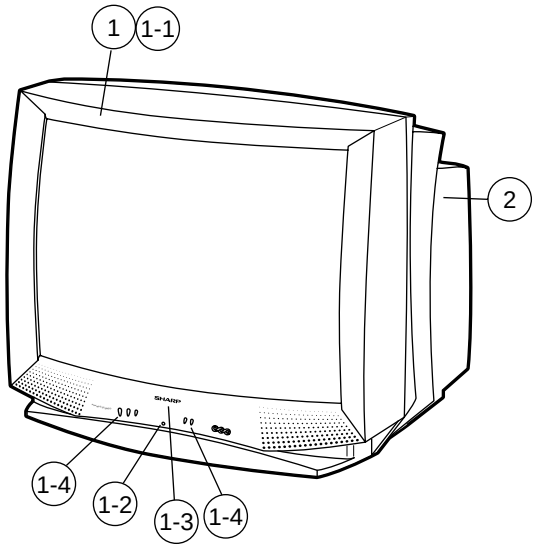
Ref. No.	Part No.	★	Description	Code
	RRMCG1324CESA	J	Infrared R/C Unit (32R-S50, 36R-S50)	AT
	RRMCG1627CESA	X	Infrared R/C Unit (32R-S400, 36R-S400, CR32S40)	AU
	TGAN-0001GJZZ	X	Guarantee Card (32R-S50/S400, 36R-S50/S400)	AB
	TiNS-7362GJZZ	X	Operation Manual (32R-S50, 36R-S50)	AG
	TiNS-7366GJZZ	X	Operation Manual (32R-S400, 36R-S400)	AG
	TiNS-7501GJZZ	X	Operation Manual (CR32S40)	AK

PACKING PARTS
(NOT REPLACEMANT ITEM)

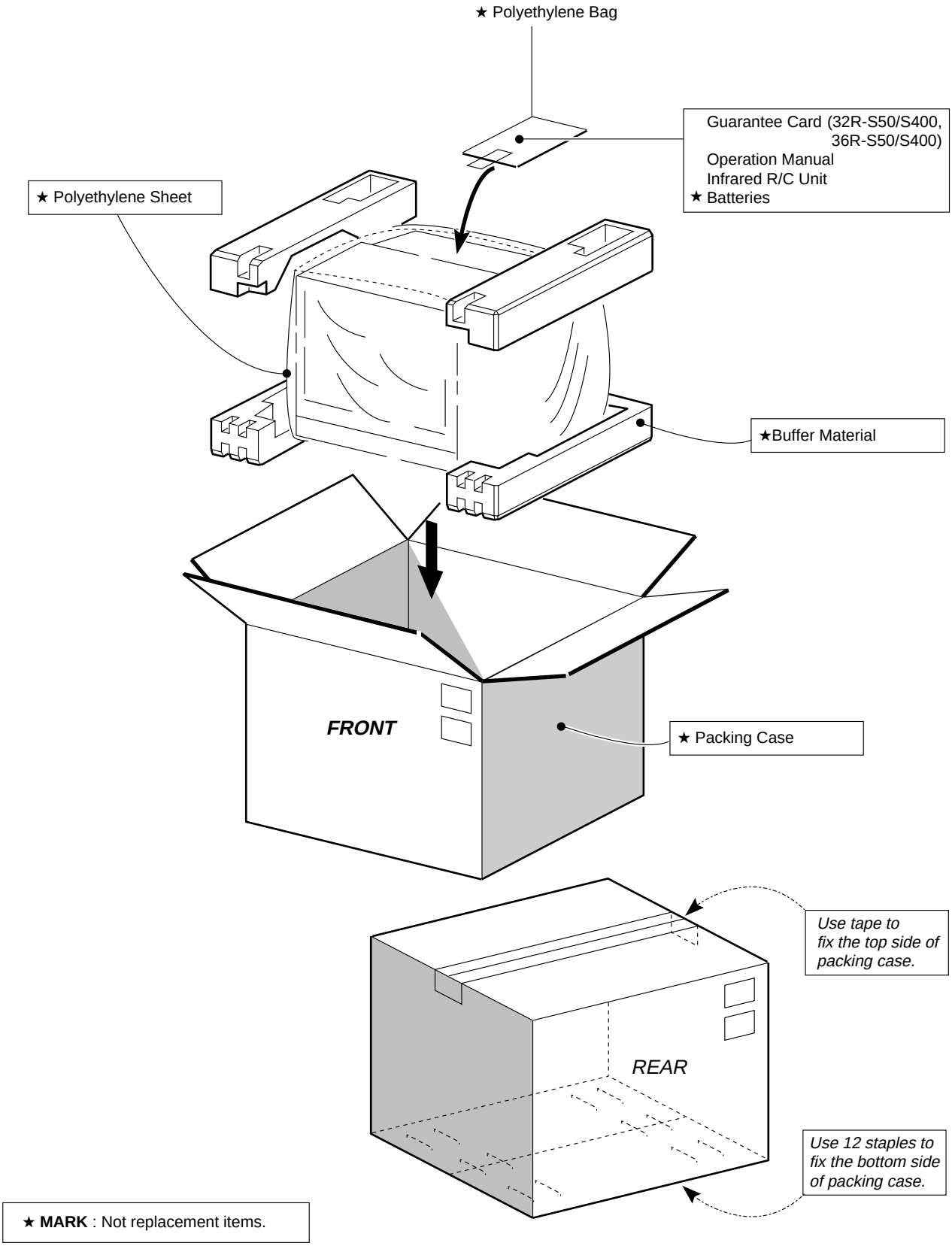
Ref. No.	Part No.	★	Description	Code
	SPAKC0167GJZZ	–	Packing Case (32R-S50)	—
	SPAKC0169GJZZ	–	Packing Case (32R-S400)	—
	SPAKC0172GJZZ	–	Packing Case (36R-S50/S400)	—
	SPAKC0215GJZZ	–	Packing Case (CR32S40)	—
	SPAKX0171MEZZ	–	Buffer Material (32R-S50/S400, CR32S40)	—
	SPAKX0172MEZZ	–	Buffer Material (36R-S50/S400)	—
	SSAKA0101GJZZ	–	Polyethylene Bag	—

CABINET PARTS

Ref. No.	Part No.	★	Description	Code
1	CCABA0121WEH0	X	Front Cabinet Ass'y (32R-S50)	BG
1	CCABA0136WEH0	X	Front Cabinet Ass'y (32R-S400)	BG
1	CCABA0123WEH0	X	Front Cabinet Ass'y (36R-S50)	BM
1	CCABA0144WEH0	X	Front Cabinet Ass'y (36R-S400)	BM
1	CCABA0136WEH2	X	Front Cabinet Ass'y (CR32S40)	
1-1	*Not Available*	–	Front Cabinet	—
1-2	GCOVA1039MEKA	X	Cover for R/C	BM
1-3	HBDGB1009MESB	X	Badge, "SHARP" (32R-S50/S400, CR32S40)	AG
1-3	HBDGB1010MESB	X	Badge, "SHARP" (36R-S50/S400)	AG
1-4	JBTN-1105MEKA	X	Button, Power, Vol-up/down, CH-up/down	AQ
2	GCABB0117GJKA	X	Rear Cabinet (32R-S50)	BD
2	GCABB0127GJKA	X	Rear Cabinet (32R-S400, CR32S40)	BD
2	GCABB0119GJKA	X	Rear Cabinet (36R-S50)	BF
2	GCABB0131GJKA	X	Rear Cabinet (36R-S400)	BG



PACKING OF THE SET



★ **MARK** : Not replacement items.

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